

Japan Coast.

4th May - 16th May
1900.

D⁵ 3695 - D⁵ 3735.

$$\begin{array}{r} 496 \\ 20 \\ \hline 9960 \end{array}$$

$$\begin{array}{r} 498 \\ 20 \\ \hline 9960 \end{array}$$

$$\begin{array}{r}
 12 \\
 \hline
 28 \\
 5 \\
 \hline
 23 \\
 5 \\
 \hline
 18 \\
 18 \\
 \hline
 2
 \end{array}$$

$$\begin{array}{r}
 3766 \\
 3695 \\
 \hline
 71
 \end{array}$$

| | | |
|--|------|--|
| | 2500 | |
| | 2600 | |
| | 2700 | |
| | 2800 | |
| | 2900 | |
| | 3000 | |
| | 3100 | |
| | 3200 | |
| | 3300 | |
| | 3400 | |
| | 3500 | |
| | 3600 | |
| | 3700 | |
| | 3800 | |
| | 3900 | |
| | 4000 | |

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|-------|--------------|------|------------|
| 25 | | | | |
| 50 | | | | |
| 100 | | | | |
| 200 | | | | |
| 300 | | | | |
| 400 | | | | |
| 500 | | | | |
| 600 | | | | |
| 700 | | | | |
| 800 | | | | |
| 900 | | | | |
| 1000 | | | | |

REMARKS:

Next numbers 3695.
 4012.

Stacy
No. 3695 S-

No. 3695 S- Date 4 May 1900

Machine. Reel.

Turns 250 Cor. + 9 Depth 259 fms.

Shot or lead 26 lb. to 110 fms.

Bottom gn. M. fm. S.

Bottom temperature

No. of thermometer } none Cor.

Corrected temperature

Air 61 Surface 64 Drift NE (km)

Trawl or dredge 8' Beam trawl 1 mile

| SOUNDING WIRE. | | TURNS. | DREDGE ROPE. | |
|------------------------------|---------|--------|---------------|---------|
| DOWN. | UP. | | DOWN. | UP. |
| 7.50.00 | 7.55.20 | 0 | 8-18.15 | 9.09.30 |
| 50.50 | 54.10 | 100 | 8-24.30 | 05.10 |
| 57.35 | 53.00 | 200 | 8-30.45 | 9.02. |
| 7.57.50 | 7.52.00 | 250 | 8.32.20 | 8.57.0. |
| | | 300 | | |
| | | 400 | | |
| | | 500 | | |
| | | 600 | | |
| | | 700 | | |
| | | 800 | | |
| | | 900 | | |
| | | 1000 | | |
| | | 1100 | | |
| | | 1200 | | |
| | | 1300 | | |
| | | 1400 | | |
| | | 1500 | | |
| | | 1600 | | |
| | | 1700 | | |
| | | 1800 | | |
| | | 1900 | | |
| ✓ Ophiurans, about 2000 | | 5 | ops, 1 quart; | |
| ✓ Star (Solaster) | | 2100 | 1 specimen, | |
| ✓ Dentalia abundant; | | 2200 | ✓ Annelids | |
| about 5 ops; | | 2300 | Pernatulus, | |
| 1 specimen; | | 2400 | Sea Anemones, | |
| about 4 species, one bolita. | | | | |

4³/₁₀ m N. 80° E. (true) from Taurangi
Saki St. No. (NO 1291.)

910
NCT
3

| | 2500 | Surface Net. |
|--|------|-----------------|
| | 2600 | |
| | 2700 | 35° 09' 20" N |
| | 2800 | 134° 46' 15" E. |
| | 2900 | |
| | 3000 | |
| | 3100 | |
| | 3200 | |
| | 3300 | |
| | 3400 | |
| | 3500 | |
| | 3600 | |
| | 3700 | |
| | 3800 | |
| | 3900 | |
| | 4000 | |

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|--|--------------|------|------------|
| 25 | Trawl net badly torn on bottom. Full of green mud from which specimens were washed out. Unbent torn net & bent on new one; old one to be repaired. | | | |
| 50 | | | | |
| 100 | | | | |
| 200 | | | | |
| 300 | | | | |
| 400 | | | | |
| 500 | — | | | |
| 600 | Dragged trawl up slope and when finished had not more than 110 to 120 fms. depth. | | | |
| 700 | | | | |
| 800 | | | | |
| 900 | | | | |
| 1000 | | | | |

Contents of haul.

REMARKS:

- ✓ 4 sps Fishes, including several Macrurus, a Beryx, and few small fishes.
- ✓ 2 sps Holothurians, including 1 specimen of deep-sea type; ✓ Echini, 2 sps, spatangida abundant; small crabs, 5 sps; ✓ Shrimps 5 sps, some large Palaemonidae; ✓ Gastropods, about 5 sps; ✓ Lamellibranchs, many, abt 5 sps;

No. *no station*. Date *4 May 1900*
Tanner Machine. Reel.

Turns *49* Cor. + *2* Depth *57 fms.*

~~Shot or lead~~ *26 pound.*

Bottom *Cr. gy. sand. sh. - p.*

Bottom temperature

No. of thermometer } *none* Cor.

Corrected temperature

Air *60* Surface *64* Drift

Trawl or dredge

| SOUNDING WIRE. | | TURNS. | DREDGE ROPE. | |
|----------------|-----|------------------|--------------|-----|
| DOWN. | UP. | | DOWN. | UP. |
| <i>11.39.</i> | | 0 | | |
| <i>40.</i> | | <i>49</i> 100 | | |
| | | 200 | | |
| | | 300 | | |
| | | 400 | | |
| | | 500 | | |
| | | 600 | | |
| | | 700 | | |
| | | 800 | | |
| | | 900 | | |
| | | 1000 | | |
| | | 1100 | | |
| | | 1200 | | |
| | | 1300 | | |
| | | 1400 | | |
| | | 1500 | | |
| | | 1600 | | |
| | | 1700 | | |
| | | 1800 | | |
| | | 1900 | | |
| | | 2000 | | |
| | | 2100 | | |
| | | 2200 | | |
| | | 2300 | | |
| | | 2400 | | |

3 1/2 m N 64° W. (true) from Suno Saki.
(Oct. 1291.)

OK
H. O. S.
3

2500
2600
2700
2800
2900
3000
3100
3200
3300
3400
3500
3600
3700
3800
3900
4000

35° 00' N
139° 41' 40" E-

496
49
447

12
10
2
49
51

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|-------|--------------|------|------------|
| 25 | | | | |
| 50 | | | | |
| 100 | | | | |
| 200 | | | | |
| 300 | | | | |
| 400 | | | | |
| 500 | | | | |
| 600 | | | | |
| 700 | | | | |
| 800 | | | | |
| 900 | | | | |
| 1000 | | | | |

REMARKS:

Hutchinson

No. 3696 55 Date 5th May 1900

Sigsbee Machine. #3 Reel.

Turns 455 Cor. + 46 Depth 501 fms

Shot or lead 35 # to 749.

Bottom Green Mld Vol Ash + sand

Bottom temperature 39°

No. of thermometer 92446 Cor.

Corrected temperature

Air 72 Surface 65 Drift {1 mile. S x E (miles) →

Trawl or dredge 8 ft Beam Tanner

SOUNDING WIRE.

DOWN.

UP.

TURNS.

DREDGE ROPE.

DOWN.

UP.

9- 04.20

19.15

0

9- 25.30

34.20

05.50

17.50

100

31.40

28.50

07.05

16.30

200

37.50

24.15

08.25

15.10

300

43.05

20.10

09.50

13.35

400

48.10

15.50

10.40

9- 12.50

455
500

52.30

11.20

57 =

06.20

700

10- 01.25

11- 01.25

742

03 =

56 =

800

09.35 - 13 =

900

19.05

10- 51 =

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

Manazuru Zaki, N70°W (true) 4 $\frac{2}{3}$ m.

OK
HCB
3

| | | | |
|--|------|------------------------|-----|
| | 2500 | Surface Net | |
| | 2600 | Jap. chart #80. | |
| | 2700 | | |
| | 2800 | 35°06'50" N | |
| | 2900 | 139°15'00" E. | |
| | 3000 | | |
| | 3100 | | |
| | 3200 | | |
| | 3300 | | |
| | 3400 | | |
| | 3500 | 5035 | 260 |
| | 3600 | 455 | 214 |
| | 3700 | 4580 | 46 |
| | 3800 | | 455 |
| | 3900 | | 501 |
| | 4000 | | fur |

316°E (true)

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|----------|-------------------|---------------|------------------------|------------|
| 25 | | | | |
| 50 | | | | |
| 100 | | | | |
| 200 | | | | |
| 300 | | | | |
| 400 | Clean haul. | | | |
| 500 | Contents of net - | | | |
| 600 | ✓ | About 8 sps | Fishes. | |
| 700 | ✓ | 5 sps. | Crustacea macrura. | |
| 800 | ✓ | 1 " | Dentalium. | |
| 900 | ✓ | 1 " | Pontalisia. (several.) | |
| 1000 | ✓ | 2 " | Holothuria | |
| | ✓ | 5 " | Gastropods. | |
| REMARKS: | | | | |
| | ✓ | 5 " | Ophiurans. | |
| | ✓ | About 10 sps. | Annelids. | |
| | ✓ | 6 sps. | Stars. | |

No. *No. 6110* Date *5th May 1910*
 Machine. *W. S.* Reel. *1*
 Turns *680* Cor. + *69* Depth *749 fms*
 Shot or lead *35 #*
 Bottom *blue vol. M.*
 Bottom temperature
 No. of thermometer } *none* Cor.
 Corrected temperature
 Air *68* Surface *65* Drift
 Trawl or dredge

| SOUNDING WIRE. | | TURNS. | DREDGE ROPE. | |
|-----------------------|--------------|-------------------|--------------|-----|
| DOWN. | UP. | | DOWN. | UP. |
| <i>11- 38.20</i> | <i>56.50</i> | 0 | | |
| <i>39.10</i> | <i>55.55</i> | 100 | | |
| <i>40.15</i> | <i>54.55</i> | 200 | | |
| <i>41.15</i> | <i>53.50</i> | 300 | | |
| <i>42.20</i> | <i>52.45</i> | 400 | | |
| <i>43.30</i> | <i>51.40</i> | 500 | | |
| <i>44.50</i> | <i>50.35</i> | 600 | | |
| <i>46 = 11- 58.10</i> | | <i>680</i> 700 | | |
| | | 800 | | |
| | | 900 | | |
| | | 1000 | | |
| | | 1100 | | |
| | | 1200 | | |
| | | 1300 | | |
| | | 1400 | | |
| | | 1500 | | |
| | | 1600 | | |
| | | 1700 | | |
| | | 1800 | | |
| | | 1900 | | |
| | | 2000 | | |
| | | 2100 | | |
| | | 2200 | | |
| | | 2300 | | |
| | | 2400 | | |

Manazuru Zaki, N52°W. (true) 7.35 m

6
10

2500
2600
2700
2800
2900
3000
3100
3200
3300
3400
3500
3600
3700
3800
3900
4000

Gap. Chart 80.

35° 03' 55" N

139° 16' 50" E.

5085 260

680 191

4355 69

610

741

fm

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|-------|--------------|------|------------|
| 25 | | | | |
| 50 | | | | |
| 100 | | | | |
| 200 | | | | |
| 300 | | | | |
| 400 | | | | |
| 500 | | | | |
| 600 | | | | |
| 700 | | | | |
| 800 | | | | |
| 900 | | | | |
| 1000 | | | | |

REMARKS:

Staley

No. *no station* Date *11/11/11*

Machine. Reel.

Turns Cor. + *2 1/2* Depth *2 1/2*

Shot or lead

Bottom *blue mud*

Bottom temperature

No. of thermometer Cor.

Corrected temperature

Air *73* Surface *65* Drift

Trawl or dredge *1 1/2' beam*

SOUNDING WIRE.

DOWN.

UP.

TURNS.

DREDGE ROPE.

DOWN.

UP.

0

100

200

11-11-11
~~300~~

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

○

| | |
|------|----------------|
| 2500 | Dep. 24.1 |
| 2600 | |
| 2700 | 35° 14' 15" N |
| 2800 | 139° 11' 10" E |
| 2900 | |
| 3000 | |
| 3100 | |
| 3200 | |
| 3300 | |
| 3400 | |
| 3500 | |
| 3600 | |
| 3700 | |
| 3800 | |
| 3900 | |
| 4000 | |

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|-------|--------------|------|------------|
| 25 | | | | |
| 50 | | | | |
| 100 | | | | |
| 200 | | | | |
| 300 | | | | |
| 400 | | | | |
| 500 | | | | |
| 600 | | | | |
| 700 | | | | |
| 800 | | | | |
| 900 | | | | |
| 1000 | | | | |

REMARKS:

REMARKS:

Stallup

No. *3647* Date *Dec 11*
W. H. C. Machine. Reel. *1*
 Turns *322* Cor. + *3* Depth *355*
 Shot or lead *35 lb*
 Bottom *dk. gy. M. vol. S.*
 Bottom temperature
 No. of thermometer *1000* Cor.
 Corrected temperature
 Air *67* Surface *61* Drift *3.1 mile*
 Trawl or dredge *3 ft. beam trawl*

SOUNDING WIRE.

DREDGE ROPE.

DOWN.

UP.

TURNS.

DOWN.

UP.

| | | | | |
|-------------------------|----------------|------------|--|-----------------------|
| | <i>02.30</i> | 0 | | |
| | <i>01.11</i> | 100 | | |
| | <i>17.10</i> | 200 | | |
| | | 300 | | |
| | | <i>322</i> | | |
| | | 400 | | |
| | | 500 | | |
| | | 600 | | |
| | | 700 | | |
| | | 800 | | |
| | | 900 | | |
| | | 1000 | | |
| | | 1100 | | |
| | | 1200 | | |
| | | 1300 | | |
| | | 1400 | | |
| | | 1500 | | |
| | | 1600 | | |
| | | 1700 | | |
| | | 1800 | | |
| | | 1900 | | |
| | <i>11 a.p.</i> | 2000 | | <i>Phoronema.</i> |
| <i>2 a.p. Sponges</i> | | 2100 | | <i>(Acetabularia)</i> |
| <i>1 Brachiopod</i> | | 2200 | | <i>(Mollusca)</i> |
| <i>Cephalopod eggs.</i> | | 2300 | | |
| | | 2400 | | |

Manzanillo, S. 26° N (true) 6 miles

| | | |
|-----------------|------|-----------------|
| | 2500 | Dep. about 40. |
| | 2600 | |
| | 2700 | 35° 14' N |
| | 2800 | 139° 12' 30" E. |
| | 2900 | |
| Buoyed in 265 | 3000 | |
| to 100 fms | 3100 | |
| | 3200 | |
| N 70° W. (true) | 3300 | |
| | 3400 | |
| | 3500 | 350 |
| | 3600 | |
| | 3700 | |
| | 3800 | |
| | 3900 | |
| | 4000 | |

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|----------------------------------|--------------|------|------------|
| 25 | Towed trawl, and | | | |
| 50 | on surface of water, the | | | |
| 100 | the water, the net taking the | | | |
| 200 | bottom at about 265 fms. and | | | |
| 300 | the bottom is | | | |
| 400 | practically the same location as | | | |
| 500 | the preceding station. | | | |
| 600 | | | | |
| 700 | Contents of net = | | | |
| 800 | 5 or 6 sps. fishes. | | | |
| 900 | 6 sps. Crustacea, macrura. | | | |
| 1000 | 6 or 7 " " Anomura. | | | |

2 sps. Echini (about 15 Pouteria.)

REMARKS:

✓ 1 " Dojaka.

✓ 1 " Crinoid.

✓ 1 " Barracuda (fam.)

✓ 1 " Pyrosoma.

✓ 3 " Ophiurians.

15 or 6 " Annelids.

✓ 1 " Pyrosoma.

No.

Dr - Date

Machine. Reel.

Turns / Cor. + 111 Depth 113 fms

Shot or lead 35 lb round

Bottom green mud with shells

Bottom temperature

No. of thermometer

Cor.

Corrected temperature

Air 67 Surface 65 Drift 1 mi

Trawl or dredge 8' beam

SOUNDING WIRE.

DOWN.

UP.

TURNS.

DREDGE ROPE.

DOWN.

UP.

0

100

200

300

350

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

1000 Dredge - many
 500 Gastropods
 500 Lamella branches
 1000 Enteropneusts
 1000 Branchiopods

Manazuru Zaki, N. 8° N. (true) 4.5 m.

1107

Jap. Chart #80,
 2500
 2600
 2700 35° 04' N
 2800 139° 10' 25" E
 2900
 3000
 3100
 3200
 3300
 3400
 3500
 3600
 3700
 3800
 3900
 4000

11840 N. (true)

Contents of net =
 SERIAL TEMPERATURES

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|----------|--------------|-----------------------------|------------|
| 25 | ✓ 2 | ops. 3 | Shoulders. | |
| 50 | ✓ 5 | " | other Fishes. | |
| 100 | ✓ 6 | " | Crustacea - anomura | |
| 200 | ✓ 4 | " | macrura | |
| 300 | ✓ 3 | " | brachyura | |
| 400 | ✓ 2 | " | Amphipoda (mostly Phronima) | |
| 500 | ✓ 1 or 2 | sp. | Pycnogonids | |
| 600 | ✓ 4 | ops. | Cephalopods | |
| 700 | ✓ 1 | " | Star | |
| 800 | ✓ 1 | " | Crinoid | |
| 900 | ✓ 1 | " | Pyrosoma | |
| 1000 | ✓ 2 | " | Echini. | |

✓ 1 Solitary Coral

REMARKS:

- ✓ 1 sp. Nematelina
- ✓ 2 " Hydroids
- ✓ 1 " Sponge
- ✓ 1 " Pennatulids
- ✓ 10 " Annelids
- ✓ 1 " Cephalopods
- 1 3 " Holothurians

Port Anson S. 74° E (true) 5.6 miles
 Entrance 10 }

OK
 1/10/11

S 64° E (true)

2500
 2600
 2700
 2800
 2900
 3000
 3100
 3200
 3300
 3400
 3500
 3600
 3700
 3800
 3900
 4000

Dep. about N 80.

34° 51' 30" N
 138° 39' 10" E

| | |
|------|-----|
| 5325 | 262 |
| 650 | 174 |
| 4375 | 66 |
| | 660 |
| | 726 |

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|------------------|--------------|------|------------|
| 25 | Contents of net: | | | |
| 50 | | | | |
| 100 | ✓ Calappa | 5 | sp. | |
| 200 | ✓ Alpheidae | 1 | " | |
| 300 | ✓ Caridea | 2 | " | |
| 400 | ✓ Amphipoda | 5 | " | |
| 500 | ✓ Amphipoda | 1 | " | |
| 600 | | | | |
| 700 | ✓ Crustacea | 1 | sp. | |
| 800 | | | | |
| 900 | | | | |
| 1000 | | | | |

REMARKS:

1. ...
 2. ...
 3. ...
 4. ...
 5. ...
 6. ...
 7. ...
 8. ...
 9. ...
 10. ...

No. *3700 B* Date *7th May 1880*
Tanner Machine. Reel.
 Turns *60* Cor. + *3* Depth *63 fms*
 Shot or lead *26 lb molyb*
 Bottom *1/2 Mud & sand*
 Bottom temperature }
 No. of thermometer } *none* Cor. *N 10° E*
 Corrected temperature } *N 5° E*
 Air *65* Surface Drift *5/6 mile*
 Trawl or dredge *Coast dredge* *single swabs*

SOUNDING WIRE.

DOWN.

UP.

TURNS.

DREDGE ROPE.

DOWN.

UP.

| | | | | |
|----------------|----------------|------------|----------------|----------------|
| <i>6.15.10</i> | <i>6.25.00</i> | <i>60</i> | <i>6.22.00</i> | <i>7.20.00</i> |
| <i>6.16.00</i> | | <i>100</i> | <i>7.07.00</i> | <i>7.36.00</i> |
| | | 200 | | |
| | | 300 | | |
| | | 400 | | |
| | | 500 | | |
| | | 600 | | |
| | | 700 | | |
| | | 800 | | |
| | | 900 | | |
| | | 1000 | | |
| | | 1100 | | |
| | | 1200 | | |
| | | 1300 | | |
| | | 1400 | | |
| | | 1500 | | |
| | | 1600 | | |
| | | 1700 | | |
| | | 1800 | | |
| | | 1900 | | |
| | | 2000 | | |
| | | 2100 | | |
| | | 2200 | | |
| | | 2300 | | |
| | | 2400 | | |

Seno Umi, N 4° E, (true) 2 miles.

| | | | |
|--|------|------|----|
| | 2500 | 1496 | 12 |
| | 2600 | 60 | 9 |
| | 2700 | 436 | 3 |
| | 2800 | | |
| | 2900 | | |
| | 3000 | | |
| | 3100 | | |
| | 3200 | | |
| | 3300 | | |
| | 3400 | | |
| | 3500 | | |
| | 3600 | | |
| | 3700 | | |
| | 3800 | | |
| | 3900 | | |
| | 4000 | | |

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|------------------|--------------|------|------------|
| 25 | Continued of net | | | |
| 50 | | | | |
| 100 | ✓ 20 f | Fishes. | | |
| 200 | ✓ 8 " | Crustaceans | | |
| 300 | ✓ 4 " | " | | |
| 400 | ✓ 2 " | Starfish | | |
| 500 | ✓ 4 " | Sponges | | |
| 600 | ✓ 2 " | Amphipods | | |
| 700 | ✓ 1 " | Polychaetes | | |
| 800 | ✓ 2 " | Foraminifera | | |
| 900 | ✓ 5 " | Foraminifera | | |
| 1000 | ✓ 1 " | Hydras | | |
| | ✓ 2 " | Polychaetes | | |
| | ✓ 3 " | Foraminifera | | |
| | ✓ 2 " | Foraminifera | | |
| | ✓ 4 " | Amphipods | | |

REMARKS:

Switchman

No. *3701 D* Date *7 May 1900*

Tanner Machine. Reel.

Turns *70* Cor. + *3* Depth *73 fms*

Shot or lead *26 lbs* to *41*

Bottom *Very Stiff Blue Mud*

Bottom temperature

No. of thermometer

Corrected temperature

Air *63°* Surface *64°* Drift *1 mile*

Trawl or dredge *Blake 5 1/2*

SOUNDING WIRE.

DOWN.

UP.

TURNS.

DREDGE ROPE.

DOWN.

UP.

| | | | | |
|--------------|--------------|-------------|-----------------|-----------------|
| <i>54.12</i> | <i>55.50</i> | <i>0</i> | <i>8: 05.10</i> | <i>9: 01.50</i> |
| <i>55.50</i> | <i>57.50</i> | <i>70</i> | <i>13.15</i> | <i>56.40</i> |
| | | <i>100</i> | | |
| | | <i>200</i> | | |
| | | <i>300</i> | | |
| | | <i>400</i> | | |
| | | <i>500</i> | | |
| | | <i>600</i> | | |
| | | <i>700</i> | | |
| | | <i>800</i> | | |
| | | <i>900</i> | | |
| | | <i>1000</i> | | |
| | | <i>1100</i> | | |
| | | <i>1200</i> | | |
| | | <i>1300</i> | | |
| | | <i>1400</i> | | |
| | | <i>1500</i> | | |
| | | <i>1600</i> | | |
| | | <i>1700</i> | | |
| | | <i>1800</i> | | |
| | | <i>1900</i> | | |
| | | <i>2000</i> | | |
| | | <i>2100</i> | | |
| | | <i>2200</i> | | |
| | | <i>2300</i> | | |
| | | <i>2400</i> | | |

San Yumi, N. 10° W. 10 mi, 2.35 mi

2500
2600
2700
2800
2900
3000
3100
3200
3300
3400
3500
3600
3700
3800
3900
4000

Chart

90.

340 112'

25" 25

138° 31'

50" 5

496
72
426

12
7
3
75
73

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|------------------|--------------|------|------------|
| 25 | Contents of net. | | | |
| 50 | | | | |
| 100 | | | | |
| 200 | ✓ 4 sp. | Hydroids | | |
| 300 | ✓ 2 " | Crinoids | | |
| 400 | ✓ 1 " | Pycnogonids | | |
| 500 | ✓ 3 " | Sponges | | |
| 600 | ✓ 3 " | Polysponges | | |
| 700 | ✓ 1 " | Pentastomids | | |
| 800 | | | | |
| 900 | | | | |
| 1000 | | | | |

REMARKS:

9 Fishes taken from the sides
 of net, collapsed
 and badly torn. Several 100 ft.
 10 min.

No. 3702 D- Date 7 May 190

Tanner Machine. Reel.

Turns 37 Cor. + 2 Depth 41 fms

Shot or lead 26 lbs. + 3V

Bottom Vol Mud + Sand R.

Bottom temperature

No. of thermometer

Corrected temperature

Air 63°

Surface 64°

Drift 1/2 mile

Trawl or dredge

Shrimp trawl 2 Sigsbee

SOUNDING WIRE.

DOWN.

UP.

TURNS.

DREDGE ROPE.

DOWN.

UP.

1- 13.25
13.50

14.5
13.55

99
100

9- 13.50
13.55

52.30
50 15

200

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

St. John's, N 13° 30' W 1.5 miles



9. Magnets taken
on bottom.

2500
2600
2700
2800
2900
3000
3100
3200
3300
3400
3500
3600
3700
3800
3900
4000

Day 100
34° 43' 25" N
138° 31' 45" E.
496
38
257
12
10
2
39
4 1/2

stripped

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|-------------------|--------------|-------------|------------|
| 25 | Contents of net = | | | |
| 50 | ✓ 10 | Crustacea | anemone | |
| 100 | ✓ 6 | " | brachyura | |
| 200 | ✓ 3 | " | | |
| 300 | ✓ 2 | Amphipoda | | |
| 400 | ✓ 1 | Crinoids | | |
| 500 | ✓ 1 | Pennatulids | | |
| 600 | ✓ 10 | Hydroids; 3 | Ap. Sponges | |
| 700 | ✓ 1 | Star; 1 | Ap. Sponges | |
| 800 | ✓ 2 | Annelids | | |
| 900 | ✓ 1 | Cephalopoda | | |
| 1000 | | | | |

REMARKS:

Net at 50 fms for 3 min, then
lowered to 75 fms
Litteral suspended & held before
taking sounding

This station located by end of line
marked also by gun tower at 11 3/4.

Hutchinson

507.

No. *no station* Date *7 May 1910*

Tanner Machine. Reel.

Turns *33* Cor. + *1* Depth *34 fms*

Shot or lead *36 lb*

Bottom *gy. Mud*

Bottom temperature

No. of thermometer } *none* Cor.

Corrected temperature

Air *63°* Surface *64°* Drift

Trawl or dredge

| SOUNDING WIRE. | | TURNS. | DREDGE ROPE. | |
|-----------------|--------------|----------------|--------------|-----|
| DOWN. | UP. | | DOWN. | UP. |
| <i>9. 33.50</i> | <i>34.20</i> | 0 | | |
| <i>34.10</i> | <i>34.13</i> | <i>33</i> | | |
| | | 100 | | |
| | | 200 | | |
| | | 300 | | |
| | | 400 | | |
| | | 500 | | |
| | | 600 | | |
| | | 700 | | |
| | | 800 | | |
| | | 900 | | |
| | | 1000 | | |
| | | 1100 | | |
| | | 1200 | | |
| | | 1300 | | |
| | | 1400 | | |
| | | 1500 | | |
| | | 1600 | | |
| | | 1700 | | |
| | | 1800 | | |
| | | 1900 | | |
| | | 2000 | | |
| | | 2100 | | |
| | | 2200 | | |
| | | 2300 | | |
| | | 2400 | | |

Time 11 mi, N 6° E. (true) 1 mile.

| | | | | |
|--------------------|--|------|-----------------|----|
| 611 J11251 2 | | 2500 | | |
| | | 2600 | 24° 43' 50" N | |
| | | 2700 | 138° 31' 10" E. | |
| | | 2800 | | |
| | | 2900 | | |
| | | 3000 | | |
| | | 3100 | | |
| | | 3200 | | |
| | | 3300 | | |
| | | 3400 | 496 | 12 |
| | | 3500 | 33 | 11 |
| | | 3600 | 463 | 1 |
| | | 3700 | | 33 |
| | | 3800 | | 34 |
| | | 3900 | | |
| | | 4000 | | |

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|-------|--------------|------|------------|
| 25 | | | | |
| 50 | | | | |
| 100 | | | | |
| 200 | | | | |
| 300 | | | | |
| 400 | | | | |
| 500 | | | | |
| 600 | | | | |
| 700 | | | | |
| 800 | | | | |
| 900 | | | | |
| 1000 | | | | |

(X)

REMARKS:

Note: This station is an intermediate one to determine the depth working through with the gear of preceding station; apparatus down 1st time sounding was taken.

No. 3703 Date May 1890.
 Tanner Machine. Reel.

Turns 30 Cor. + Depth 31 fms.

Shot or lead 35 lb.

Bottom vol. S. G.

Bottom temperature

No. of thermometer } none — Cor.

Corrected temperature

Air 64° Surface 64° Drift 1/2 mile,

Trawl or dredge 5 1/2 ft Blake

SOUNDING WIRE.

DREDGE ROPE.

| SOUNDING WIRE. | | TURNS. | DREDGE ROPE. | |
|----------------|-------|--------|--------------|-------|
| DOWN. | UP. | | DOWN. | UP. |
| 53.30 | 53.55 | 0 | 9.19.15 | 42.15 |
| 53.40 | 53.45 | 15 | 10.00.00 | 42.20 |
| | | 200 | | |
| | | 300 | | |
| | | 400 | | |
| | | 500 | | |
| | | 600 | | |
| | | 700 | | |
| | | 800 | | |
| | | 900 | | |
| | | 1000 | | |
| | | 1100 | | |
| | | 1200 | | |
| | | 1300 | | |
| | | 1400 | | |
| | | 1500 | | |
| | | 1600 | | |
| | | 1700 | | |
| | | 1800 | | |
| | | 1900 | | |
| | | 2000 | | |
| | | 2100 | | |
| | | 2200 | | |
| | | 2300 | | |
| | | 2400 | | |

Seno' Ami, N 16° E. (true) 10.85 miles.

| | | | |
|--|------|----------|------|
| | 2500 | | |
| | 2600 | 114° 31' | 150. |
| | 2700 | 34° 44' | N. |
| | 2800 | 138° 31' | E. |
| | 2900 | | |
| | 3000 | | |
| | 3100 | | |
| | 3200 | | |
| | 3300 | | |
| | 3400 | | |
| | 3500 | 496 | 12 |
| | 3600 | 30 | 11 |
| | 3700 | 466 | 31 |
| | 3800 | | |
| | 3900 | | |
| | 4000 | | |

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|---------------------|--------------|------|------------|
| 25 | | | | |
| 50 | Contents of net = | | | |
| 100 | | | | |
| 200 | ✓ Crustacea anomura | | | 40 ps |
| 300 | ✓ " brachyura | | | 3 " |
| 400 | ✓ amphipoda | | | 1 " |
| 500 | ✓ Pycnogonids | | | 1 " |
| 600 | ✓ Hydroids | | | 1 " |
| 700 | ✓ Polyspongia | | | 2 " |
| 800 | ✓ Crinoids | | | 1 " |
| 900 | ✓ Annelids | | | 6 " |
| 1000 | ✓ Bacteriospores | | | 2 " |
| | ✓ Cephalopods | | | 1 " |

REMARKS:

This station also marks the end of the line worked over by gas line at 3702 ft.

Section

No. *no station* Date *7th May 1900*
Tanner Machine. Reel.
Turns *31* Cor. + *1* Depth *32 fms*
Shot or lead *26 lb.*
Bottom *Co. gy. sand - black sh. br. Md.*
Bottom temperature
No. of thermometer } *none* Cor.
Corrected temperature
Air *64°* Surface *64°* Drift
Trawl or dredge

| SOUNDING WIRE. | | TURNS. | DREDGE ROPE. | |
|-----------------|--------------|--------|--------------|-----|
| DOWN. | UP. | | DOWN. | UP. |
| <i>10-37.30</i> | <i>38.05</i> | 0 | | |
| <i>37.50</i> | <i>38.55</i> | 31 | | |
| | | 100 | | |
| | | 200 | | |
| | | 300 | | |
| | | 400 | | |
| | | 500 | | |
| | | 600 | | |
| | | 700 | | |
| | | 800 | | |
| | | 900 | | |
| | | 1000 | | |
| | | 1100 | | |
| | | 1200 | | |
| | | 1300 | | |
| | | 1400 | | |
| | | 1500 | | |
| | | 1600 | | |
| | | 1700 | | |
| | | 1800 | | |
| | | 1900 | | |
| | | 2000 | | |
| | | 2100 | | |
| | | 2200 | | |
| | | 2300 | | |
| | | 2400 | | |

Sono Umi, 3470° E. (true) 0.45 mile.

| | | |
|--|------|---|
| | 2500 | Jap coast 80. 34° 44' 10" N. 138° 30' 50" E - |
| | 2600 | |
| | 2700 | |
| | 2800 | |
| | 2900 | |
| | 3000 | |
| | 3100 | |
| | 3200 | |
| | 3300 | 496 31 — 565 |
| | 3400 | |
| | 3500 | |
| | 3600 | |
| | 3700 | |
| | 3800 | |
| | 3900 | |
| | 4000 | |

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|-------|--------------|------|------------|
| 25 | | | | |
| 50 | | | | |
| 100 | | | | |
| 200 | | | | |
| 300 | | | | |
| 400 | | | | |
| 500 | | | | |
| 600 | | | | |
| 700 | | | | |
| 800 | | | | |
| 900 | | | | |
| 1000 | | | | |

REMARKS:

at this posⁿ.

Hutchinson

No. _____ Date *7 May 1900*

Tanner Machine. Reel.

Turns *60* Cor. + *9* Depth *69*

Shot or lead *25 lb*

Bottom

Bottom temperature

No. of thermometer *7412* Cor.

Corrected temperature

Air Surface Drift

Trawl or dredge

SOUNDING WIRE.

DREDGE ROPE.

| SOUNDING WIRE. | | TURNS. | DREDGE ROPE. | |
|------------------|--------------|--------|--------------|-----|
| DOWN. | UP. | | DOWN. | UP. |
| <i>11- 04.20</i> | <i>04.55</i> | 0 | | |
| <i>04.50</i> | | 100 | | |
| | | 200 | | |
| | | 300 | | |
| | | 400 | | |
| | | 500 | | |
| | | 600 | | |
| | | 700 | | |
| | | 800 | | |
| | | 900 | | |
| | | 1000 | | |
| | | 1100 | | |
| | | 1200 | | |
| | | 1300 | | |
| | | 1400 | | |
| | | 1500 | | |
| | | 1600 | | |
| | | 1700 | | |
| | | 1800 | | |
| | | 1900 | | |
| | | 2000 | | |
| | | 2100 | | |
| | | 2200 | | |
| | | 2300 | | |
| | | 2400 | | |

| | | | |
|--|------|------------|-----------|
| | 2500 | | |
| | 2600 | | |
| | 2700 | | |
| | 2800 | | |
| | 2900 | | |
| | 3000 | | |
| | 3100 | | |
| | 3200 | | |
| | 3300 | 496 | 12 |
| | 3400 | 60 | 9 |
| | 3500 | <u>436</u> | <u>3</u> |
| | 3600 | | 60 |
| | 3700 | | <u>63</u> |
| | 3800 | | |
| | 3900 | | |
| | 4000 | | |

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|-------|--------------|------|------------|
| 25 | | | | |
| 50 | | | | |
| 100 | | | | |
| 200 | | | | |
| 300 | | | | |
| 400 | | | | |
| 500 | | | | |
| 600 | | | | |
| 700 | | | | |
| 800 | | | | |
| 900 | | | | |
| 1000 | | | | |

REMARKS:

Sketches

No. *11-3704* Date *7th May 1900*
Tanner Machine. Reel.
 Turns *90* Cor. + *H* Depth *94 fms*
 Shot or lead *26 lb* *to 150 lbs.*
 Bottom *fine vol. S.*
 Bottom temperature
 No. of thermometer } *76000* Cor. *N 2.5 E*
 Corrected temperature } *(H. H. H.)*
 Air *63°* Surface *64°* Drift *1 mile*
 Trawl or dredge *5 1/2 ft. Blake*

| SOUNDING WIRE. | | TURNS. | DREDGE ROPE. | |
|-----------------|--------------|-------------|-----------------|-----------------|
| DOWN. | UP. | | DOWN. | UP. |
| <i>11-06.50</i> | <i>08-</i> | <i>0</i> | <i>11-10.35</i> | <i>48.55</i> |
| <i>07.30</i> | <i>07.35</i> | <i>10</i> | <i>17.30</i> | <i>5-</i> |
| | | <i>200</i> | <i>22.30</i> | <i>11-41.05</i> |
| | | <i>300</i> | | |
| | | <i>400</i> | | |
| | | <i>500</i> | | |
| | | <i>600</i> | | |
| | | <i>700</i> | | |
| | | <i>800</i> | | |
| | | <i>900</i> | | |
| | | <i>1000</i> | | |
| | | <i>1100</i> | | |
| | | <i>1200</i> | | |
| | | <i>1300</i> | | |
| | | <i>1400</i> | | |
| | | <i>1500</i> | | |
| | | <i>1600</i> | | |
| | | <i>1700</i> | | |
| | | <i>1800</i> | | |
| | | <i>1900</i> | | |
| | | <i>2000</i> | | |
| | | <i>2100</i> | | |
| | | <i>2200</i> | | |
| | | <i>2300</i> | | |
| | | <i>2400</i> | | |

200 fms, S. 30° E. (true) 1 1/10 miles

OK
10-51

2500
2600
2700
2800
2900
3000
3100
3200
3300
3400
3500
3600
3700
3800
3900
4000

340 45' 45" N
138° 30' 40" E

496
90
406
12
8
4
90
94

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|---------------------|--------------|------|------------|
| 25 | Contents of net = | | | |
| 50 | ✓ Fishes - | | | 1 2/100. |
| 100 | ✓ Crustacea anomura | | 1 | " |
| 200 | ✓ " brachyura | | 1 | " |
| 300 | ✓ Ophiurans | | 4 | " |
| 400 | ✓ Phoronida | | 1 | " |
| 500 | ✓ Ctenophora | | 1 | " |
| 600 | ✓ Scyphozoa | | 3 | " |
| 700 | ✓ Hydrozoans | | 2 | " |
| 800 | ✓ Annelids | | 4 | " |
| 900 | ✓ Nemertea | | 1 | " |
| 1000 | ✓ Serpulitidae | | 1 | " |
| | REMARKS: | | | |
| | ✓ Pteropoda | | 6 | " |
| | ✓ Brachyopoda | | 1 | " |
| | ✓ Bivalvia | | 1 | " |
| | ✓ Bivalvia | | 2 | " |
| | ✓ Lapidaria | | 1 | " |

Anticline

No. *no station*. Date *7th May 1900*

Tanner Machine. — Reel.

Turns *245* Cor. + *9* Depth *254 fms*

Shot or lead *26 lb.*

Bottom *fine, red. S.*

Bottom temperature

No. of thermometer } *none* Cor.

Corrected temperature

Air *61* Surface *63.4* Drift

Trawl or dredge

| SOUNDING WIRE. | | TURNS. | DREDGE ROPE. | |
|-----------------|-----------------|--------|--------------|-----|
| DOWN. | UP. | | DOWN. | UP. |
| <i>11-44-00</i> | <i>11-25-10</i> | 0 | | |
| | | 100 | | |
| | | 200 | | |
| | | 300 | | |
| | | 400 | | |
| | | 500 | | |
| | | 600 | | |
| | | 700 | | |
| | | 800 | | |
| | | 900 | | |
| | | 1000 | | |
| | | 1100 | | |
| | | 1200 | | |
| | | 1300 | | |
| | | 1400 | | |
| | | 1500 | | |
| | | 1600 | | |
| | | 1700 | | |
| | | 1800 | | |
| | | 1900 | | |
| | | 2000 | | |
| | | 2100 | | |
| | | 2200 | | |
| | | 2300 | | |
| | | 2400 | | |

Lat. 11° 10' N, Long. 157° 11' W, 2.5 miles.

61
3107

2500
2600
2700
2800
2900
3000
3100
3200
3300
3400
3500
3600
3700
3800
3900
4000

Jap. Chart #50.
340° 47' 31"
138° 31' 30" E.

496
245
251

12
3
9
245
254

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|-------|--------------|------|------------|
| 25 | | | | |
| 50 | | | | |
| 100 | | | | |
| 200 | | | | |
| 300 | | | | |
| 400 | | | | |
| 500 | | | | |
| 600 | | | | |
| 700 | | | | |
| 800 | | | | |
| 900 | | | | |
| 1000 | | | | |

REMARKS:

This station located and by line made way by open lowered at 5-3704.

No. 3705

Date

7th May

Machine.

Reel.

Turns Cor. +

Depth

Shot or lead

Bottom

Bottom temperature

No. of thermometer

Cor. 281.6

Corrected temperature

Air Surface

Drift 1 mile

Trawl or dredge

SOUNDING WIRE.

DOWN.

UP.

TURNS.

DREDGE ROPE.

DOWN.

UP.

0

100

200

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

101 fms. 1/2
surface

Soundings. S. 18° N. 1 mi, 5 3/10 mi.

| | | |
|--|------|-----------------|
| | 2500 | |
| | 2600 | Jap. 100 fms. |
| | 2700 | 340 49' 15" N |
| | 2800 | 138° 34' 45" E. |
| | 2900 | |
| | 3000 | |
| | 3100 | |
| | 3200 | |
| | 3300 | |
| | 3400 | |
| | 3500 | |
| | 3600 | |
| | 3700 | |
| | 3800 | |
| | 3900 | |
| | 4000 | |

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|----------------|--------------|------|------------|
| 25 | Surface net | 1000 | | 100 fms. |
| 50 | 1st Copepod | | | |
| 100 | 2nd Copepod | | | |
| 200 | | | | |
| 300 | 1st Copepod | | | |
| 400 | 2nd Copepod | | | |
| 500 | 1 spec. Noctua | | | 100 fms. |
| 600 | | | | |
| 700 | | | | |
| 800 | | | | |
| 900 | | | | |
| 1000 | | | | |

REMARKS:

Surface net over at 11:25
 " " " " 1:40

M. W. L.

No. *100* - Date *8*

Machine. Reel.

Turns *100* Cor. + *10* Depth *110*

Shot or lead

Bottom *gy. m.*

Bottom temperature

No. of thermometer *1* Cor.

Corrected temperature

Air Surface Drift

Trawl or dredge

SOUNDING WIRE.

DOWN.

UP.

TURNS.

DREDGE ROPE.

DOWN.

UP.

0

100

200

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

| | | |
|------|---------------|---------|
| 2500 | Jan. 1st 1880 | |
| 2600 | 34° 58' | 20° 30' |
| 2700 | 138° 43' | 40° 5' |
| 2800 | | |
| 2900 | | |
| 3000 | 34° 58' | 20° 30' |
| 3100 | 138° 43' | 40° 5' |
| 3200 | 47° 27' | 30° 6' |
| 3300 | | |
| 3400 | | |
| 3500 | | |
| 3600 | | |
| 3700 | | |
| 3800 | | |
| 3900 | | |
| 4000 | | |

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|-------|--------------|------|------------|
| 25 | | | | |
| 50 | | | | |
| 100 | | | | |
| 200 | | | | |
| 300 | | | | |
| 400 | | | | |
| 500 | | | | |
| 600 | | | | |
| 700 | | | | |
| 800 | | | | |
| 900 | | | | |
| 1000 | | | | |

REMARKS:

No. 2507 Date 8 May 1910

Machine. Reel.

Turns 61 Cor. + 2 Depth 63

Shot or lead 26 5 lb

Bottom vol. S. A. 6. 15-70 fm from chart

Bottom temperature

No. of thermometer } Now Cor.

Corrected temperature

Air Surface Drift 1 1/2 mi

Trawl or dredge

SOUNDING WIRE.

DOWN.

UP.

TURNS.

DREDGE ROPE.

DOWN.

UP.

10 10.46.50 11.28.35

100 10.52.15 11.25.00

200 10.57.50

300 11.03.25

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

✓ 11 sp. Decapoda

✓ 7 " Gammaridae

✓ 1 " Anomura

✓ 1 " Brachyopoda

✓ 1 " Cephalopod

✓ 1 " Echinoderm

✓ 1 " Amphipoda

✓ 3 " Isopoda

✓ 2 " Crustacea

U.S. Zepi, S, 53° 11' N. (true) 2-1/2 mi ✓

| | | | |
|------------|------|------------------------------|--|
| Geno Tra - | 2500 | 35° 03' N 138° 49' 30" E. | |
| | 2600 | | |
| | 2700 | | |
| | 2800 | | |
| | 2900 | | |
| | 3000 | | |
| | 3100 | | |
| | 3200 | | |
| | 3300 | | |
| | 3400 | | |
| | 3500 | | |
| | 3600 | | |
| | 3700 | | |
| | 3800 | | |
| | 3900 | | |
| | 4000 | | |

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|-------|--------------|------|------------|
| 25 | 14.5 | 1 | | |
| 50 | 14.0 | 1 | | |
| 100 | 13.5 | 1 | | |
| 200 | 13.0 | 1 | | |
| 300 | 12.5 | 1 | | |
| 400 | 12.0 | 1 | | |
| 500 | 11.5 | 1 | | |
| 600 | 11.0 | 1 | | |
| 700 | 10.5 | 1 | | |
| 800 | 10.0 | 1 | | |
| 900 | 9.5 | 1 | | |
| 1000 | 9.0 | 1 | | |

- ✓ 1 " Alcyonaceae.
- ✓ 2 " Hydroids.
- ✓ 3 " Polysiphonia.
- ✓ 2 " Siphonophores.
- ✓ 2 " Actinians.
- ✓ 1 " Annelids.
- ✓ 1 " Sponges.
- ✓ 4 " Pinnate.

REMARKS:

Hunter

No.

Date

Machine.

Reel.

Turns

Cor. +

Depth

60 to 70 fms

Shot or lead

Bottom

Bottom temperature

No. of thermometer

Cor.

Corrected temperature

Air

66

Surface

65

Drift

Trawl or dredge

SOUNDING WIRE.

DOWN.

UP.

TURNS.

DREDGE ROPE.

DOWN.

UP.

0

100

150

200

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

11 59 =
12:03.50
05.50

58.30
62.45
12:05.50

12:24 " 12:03.50
12:35 " 12:05.50
12:44 " 12:05.50

Oaezaki, E. 55° 44' (true) 2 3/4 m/

Ocean Area -

2500
2600
2700
2800
2900
3000
3100
3200
3300
3400
3500
3600
3700
3800
3900
4000

Jap. chart 180.
35° 03' 10" N
138° 50' 8"

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|-------|--------------|------|------------|
| 25 | 11.0 | | | |
| 50 | 10.5 | | | |
| 100 | | | | |
| 200 | 7.0 | | | |
| 300 | 4.0 | | | |
| 400 | 4.0 | | | |
| 500 | 5.0 | | | |
| 600 | 5.0 | | | |
| 700 | 2.0 | | | |
| 800 | 3.0 | | | |
| 900 | 6.0 | | | |
| 1000 | 1.0 | | | |

- REMARKS:
- ✓ 1.0
 - ✓ 4.0
 - ✓ 1.0
 - ✓ 3.0
 - ✓ 2.0
 - ✓ 3.0
 - ✓ 15.0
 - ✓ 1.0

No.

3709

Date

Machine.

Reel.

Turns

166

Cor. +

Depth

Shot or lead

36

Bottom

stf. bl. vol. M.

Bottom temperature

No. of thermometer

217016

Cor.

Corrected temperature

Air

Surface

Drift

S. 41° E. 1^m

Trawl or dredge

SOUNDING WIRE.

DOWN.

UP.

TURNS.

DREDGE ROPE.

DOWN.

UP.

20.20 21.00

0

25

100

21.15 22.00

166

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

N 77° E. Sp. 1000. Seismicity, N 77° E (true) 1/2 m

| | | |
|--|------|----------------|
| | 2500 | Dep. 1000' 80' |
| | 2600 | 35° 00' 40" N |
| | 2700 | 138° 32' 50" E |
| | 2800 | |
| | 2900 | |
| | 3000 | 4 1/2 1/2 |
| | 3100 | 1 1/2 1/2 |
| | 3200 | 2 1/2 1/2 |
| | 3300 | 1 1/2 1/2 |
| | 3400 | 1 1/2 1/2 |
| | 3500 | 1 1/2 1/2 |
| | 3600 | |
| | 3700 | |
| | 3800 | |
| | 3900 | |
| | 4000 | |

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|--------------------------|--------------|------|------------|
| 25 | Not fully down on sample | | | |
| 50 | bottom - | | | |
| 100 | | | | |
| 200 | Contents of net = | | | |
| 300 | | | | |
| 400 | ✓ 10 | 10 | | |
| 500 | ✓ 1 | 1 | | |
| 600 | ✓ 6 | 6 | | |
| 700 | ✓ 1 | 1 | | |
| 800 | ✓ 1 | 1 | | |
| 900 | ✓ 4 | 4 | | |
| 1000 | ✓ 3 | 3 | | |

REMARKS:

No. 3510 Date 10/11/1881
 Machine W. B. Reel
 Turns 726 Cor. + 74 Depth 800
 Shot or lead 677 lbs
 Bottom fine sand
 Bottom temperature
 No. of thermometer 1 Cor.
 Corrected temperature
 Air 63 Surface 63 Drift 11.35 m
 Trawl or dredge 5 ft

SOUNDING WIRE.

DREDGE ROPE.

DOWN.

UP.

TURNS.

DOWN.

UP.

| | | | | |
|----------|----------|------|---------|--|
| 10.22.10 | 10-39.45 | 0 | | |
| 23.05 | 38.40 | 100 | | |
| | | 200 | | |
| 25.20 | 36.35 | 300 | | |
| 26.30 | 35.30 | 400 | 11.35.0 | |
| 27.40 | 34.20 | 500 | | |
| 28.50 | 33.10 | 600 | | |
| 30.15 | 32.20 | 700 | | |
| | | 726 | | |
| | | 800 | | |
| | | 900 | 12.10 | |
| | | 1000 | | |
| | | 1100 | | |
| | | 1200 | | |
| | | 1300 | | |
| | | 1400 | | |
| | | 1500 | | |
| | | 1600 | | |
| | | 1700 | | |
| | | 1800 | | |
| | | 1900 | | |
| | | 2000 | | |
| | | 2100 | | |
| | | 2200 | | |
| | | 2300 | | |
| | | 2400 | | |

Entrance Port Heda, N 88° E, (true) 6.5 m.

| | | |
|--|------|-----------------|
| | 2500 | Depth 2500 |
| | 2600 | 34° 58' 10" N. |
| | 2700 | 138° 38' 00" E. |
| | 2800 | |
| | 2900 | |
| | 3000 | |
| | 3100 | 5.1 - 26 |
| | 3200 | |
| | 3300 | |
| | 3400 | 25.1 |
| | 3500 | |
| | 3600 | |
| | 3700 | |
| | 3800 | |
| | 3900 | |
| | 4000 | |

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|----------|--------------|------|------------|
| 25 | | | | |
| 50 | | | | |
| 100 | | | | |
| 200 | | | | |
| 300 | ✓ 2 1/10 | ✓ 1 | | |
| 400 | ✓ 3 " | ✓ 2 | | |
| 500 | ✓ 1 " | ✓ 3 | | |
| 600 | ✓ 1 " | ✓ 4 | | |
| 700 | | | | |
| 800 | | | | |
| 900 | | | | |
| 1000 | | | | |

REMARKS:

No. *251* Date

Machine. Reel.

Turns *615* Cor. + *6.2* DepthShot or lead *55 lb*Bottom *Vol. S. M.*

Bottom temperature

No. of thermometer

Cor.

Corrected temperature

Air *60*Surface *6.2*

Drift

Trawl or dredge *5/2*

SOUNDING WIRE.

DREDGE ROPE.

| DOWN. | UP. | TURNS. | DOWN. | UP. |
|--------------|--------------|------------|-----------------|-----|
| <i>26.30</i> | <i>20.00</i> | 0 | <i>26.30</i> | |
| <i>07.13</i> | <i>19.00</i> | 100 | | |
| <i>21.0</i> | <i>18.00</i> | 200 | <i>41.10</i> | |
| | | 300 | | |
| | | 400 | <i>49.00</i> | |
| | | 500 | | |
| | | 600 | <i>55.00</i> | |
| | | <i>615</i> | <i>56.13.00</i> | |
| | | 700 | | |
| | | 800 | <i>12.20</i> | |
| | | 900 | | |
| | | 1000 | | |
| | | 1100 | | |
| | | 1200 | | |
| | | 1300 | | |
| | | 1400 | | |
| | | 1500 | | |
| | | 1600 | | |
| | | 1700 | | |
| | | 1800 | | |
| | | 1900 | | |
| | | 2000 | | |
| | | 2100 | | |
| | | 2200 | | |
| | | 2300 | | |
| | | 2400 | | |

This sounding
 was made at
 end of track of
 B-3710.

Lat. 14° 42' N, Long. 116° 30' E, (true) 6.2 m. ✓

SPT. 1

GC
SPT.

1/2 - down to
air sample - acc'd
to chart.

2500
2600
2700
2800
2900
3000
3100
3200
3300
3400
3500
3600
3700
3800
3900
4000

Depth 1400
35° 01' 15" N.
136° 34' 10" E.

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|-------|--------------|------|------------|
| 25 | | | | |
| 50 | | | | |
| 100 | | | | |
| 200 | | | | |
| 300 | | | | |
| 400 | | | | |
| 500 | | | | |
| 600 | | | | |
| 700 | | | | |
| 800 | | | | |
| 900 | | | | |
| 1000 | | | | |

REMARKS:

No. *3512 D* Date *10 May 1900*
 Machine. -- Recl.

Turns --- Cor. + --- Depth *500 to 600*
 Shot or lead --- *from chart.*

Bottom

Bottom temperature

No. of thermometer } *none* Cor.

Corrected temperature

Air *65* Surface *64* Drift *1 1/2*

Trawl or dredge *Open Intermediate No. 5*

| SOUNDING WIRE. | | TURNS. | DREDGE ROPE. | |
|----------------|-----|----------------|--|----------------|
| DOWN. | UP. | | DOWN. | UP. |
| | | 0 | <i>4:34:00</i> | <i>2:15:00</i> |
| | | 100 | | <i>45:30</i> |
| | | 200 | <i>46:40</i> | <i>37:51</i> |
| | | <i>350</i> | | <i>35:00</i> |
| | | 300 | | |
| | | 400 | | |
| | | 500 | <i>Interval 2:30 from 500 up to surface.</i> | |
| | | 600 | | |
| | | 700 | | |
| | | 800 | | |
| | | 900 | | |
| | | 1000 | | |
| | | 1100 | | |
| | | 1200 | | |
| | | 1300 | | |
| | | 1400 | | |
| | | 1500 | | |
| | | 1600 | | |
| | | 1700 | | |
| | | 1800 | | |
| | | 1900 | | |
| | | 2000 | | |
| | | 2100 | | |
| | | 2200 | | |
| | | 2300 | | |
| | | 2400 | | |

Oct 2nd, S. 75° E. (true) 6 1/2 m.

| | | | |
|--|------|-------------|---------|
| fms. (Jap. #80) 35° 03' 30" N 138° 39' 50" E. | 2500 | Surface Net | |
| | 2600 | PM | PM. |
| | 2700 | 4- 09.30 | 4- 36 = |
| | 2800 | | |
| | 2900 | | |
| | 3000 | | |
| | 3100 | | |
| | 3200 | | |
| | 3300 | | |
| | 3400 | | |
| | 3500 | | |
| | 3600 | | |
| | 3700 | | |
| | 3800 | | |
| | 3900 | | |
| | 4000 | | |

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|-------------------------|----------------|------|------------|
| 25 | Contents of surface net | | | |
| 50 | 1 sp. Copepoda | | | |
| 100 | 1 " Fish | | | |
| 200 | Intermediate net | | | |
| 300 | 2 | sp. Eurytemora | | |
| 400 | 2 | " | | |
| 500 | 2 | " Copepoda | | |
| 600 | 1 | " | | |
| 700 | 1 | " | | |
| 800 | 1 | " Medusa | | |
| 900 | 1 | " Phronima | | |
| 1000 | 1 | " Astratoda | | |

✓ 2 sp. Fishes.

REMARKS:

No. 3713 Date 11 July 1901

Machine. — Reel.

Turns Cor. + Depth 115

Shot or lead 36 #

Bottom Vol. S. and

Bottom temperature

No. of thermometer 11111 Cor.

Corrected temperature 1 (71.2) (100)

Air 50 Surface 65 Drift

Trawl or dredge 20

SOUNDING WIRE.

DOWN.

UP.

TURNS.

DREDGE ROPE.

DOWN.

UP.

5.48

0
100
200
300
400
500
600
700
800
900
1000
1100
1200
1300
1400
1500
1600
1700
1800
1900
2000
2100
2200
2300
2400

Openings, 5.810711 (true) 4.2 m

| | | |
|-------|------|----------------|
| Yucca | 2500 | Dep. about 250 |
| OK | 2600 | 55° 02' 15" N |
| 20.2 | 2700 | 138° 52' 20" E |
| 20.2 | 2800 | |
| 20.2 | 2900 | |
| 20.2 | 3000 | |
| 20.2 | 3100 | |
| 20.2 | 3200 | |
| 20.2 | 3300 | |
| 20.2 | 3400 | |
| 20.2 | 3500 | |
| 20.2 | 3600 | |
| 20.2 | 3700 | |
| 20.2 | 3800 | |
| 20.2 | 3900 | |
| 20.2 | 4000 | |

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|-------|--------------|------|------------|
| 25 | 51.0 | 1 | | |
| 50 | 50.0 | 1 | | |
| 100 | 49.0 | 1 | | |
| 200 | 48.0 | 1 | | |
| 300 | 47.0 | 1 | | |
| 400 | 46.0 | 1 | | |
| 500 | 45.0 | 1 | | |
| 600 | 44.0 | 1 | | |
| 700 | 43.0 | 1 | | |
| 800 | 42.0 | 1 | | |
| 900 | 41.0 | 1 | | |
| 1000 | 40.0 | 1 | | |

- REMARKS:
- ✓ 2 " Crinoids
 - ✓ 2 " Actinoptera
 - ✓ 2 " Dentalia
 - ✓ 1 " Brachyopoda
 - ✓ 2 " Pteropoda
 - ✓ 3 " Nauplii
 - ✓ 2 " Echinodermata
 - ✓ 3 " Lamellibranchia

No. *111* Date *11/10*

Machine. Reel.

Turns Cor. +

Depth *48 fms.*
from chart.

Shot or lead

Bottom

Bottom temperature

No. of thermometer

Cor.

Corrected temperature

Air *56* Surface *65* Drift *1.4 m*Trawl or dredge *KA-T-100*

SOUNDING WIRE.

DOWN.

UP.

TURNS.

DREDGE ROPE.

DOWN.

UP.

0

100

200

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

Cape York, S. 82° 11' (true) 3.3 m

Alena Ura -

depths of
water

2500
2600
2700
2800
2900
3000
3100
3200
3300
3400
3500
3600
3700
3800
3900
4000

log. count 176,
35° 03' 10" N
131° 51' 20" E.

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|--------|----------------------|------|------------|
| 25 | | | | |
| 50 | | | | |
| 100 | | | | |
| 200 | ✓ 60.0 | Fishes | | |
| 300 | ✓ 2.0 | Alcyonaria | | |
| 400 | ✓ 1.0 | Scyphozoa | | |
| 500 | ✓ 1.0 | Porosipora | | |
| 600 | ✓ 1.0 | Crustacea, Amphipoda | | |
| 700 | ✓ 2.0 | " | | |
| 800 | ✓ 3.0 | Siphonous | | |
| 900 | ✓ 1.0 | Cephalopoda | | |
| 1000 | ✓ 3.0 | Amphipoda | | |

- ✓ 1.0 Actinidia
REMARKS:
✓ 1.0 Hydroids
✓ 1.0 Echinodermata
✓ 3.0 Sponges
✓ 3.0 Crinoids
✓ 2.0 Sponges
✓ 2.0 Echini

No. 3715

Date

Machine.

Reel.

Turns

Cor. +

Depth

68 fms.
from chart

Shot or lead

Bottom

Bottom temperature

Did not sound -

No. of thermometer

Cor.

Corrected temperature

Air

89

Surface

65

Drift

S. 74° W.
7/8 m.

Trawl or dredge

SOUNDING WIRE.

DREDGE ROPE.

DOWN.

UP.

TURNS.

DOWN.

UP.

100

200

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

7.31.30

8.25.35

Oceanographer, 2,560' (11,100) 1570 m.

Yens T. ...

to 65.

2500

2600

2700

2800

2900

3000

3100

3200

3300

3400

3500

3600

3700

3800

3900

4000

35° 02' 25" N

138° 48' 55" E.

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|---------|--------------|------|------------|
| 25 | | | | |
| 50 | | | | |
| 100 | | | | |
| 200 | | | | |
| 300 | | | | |
| 400 | ✓ 6 sp. | Fishes | | |
| 500 | ✓ 6 " | Crustacea | | |
| 600 | ✓ 2 " | " | | |
| 700 | ✓ 11 " | Gephyreans | | |
| 800 | ✓ 2 " | Starfish | | |
| 900 | ✓ 2 " | Crinoids | | |
| 1000 | ✓ 2 " | Annelids | | |

✓ 2 " Amphipods

REMARKS:

✓ 4 " Alcyonaria

✓ 1 " Sponges

✓ 2 " Sponges

✓ 3 " Sponges

✓ 2 " Pennatulaceans

No. **3716** **51** Date

Machine. Reel.

Turns Cor. +

Shot or lead

Bottom

Bottom temperature

No. of thermometer

Corrected temperature

Air **74** Surface **66**

Trawl or dredge

Depth **65 fms**
from chart.
Did not sound.

Cor.

Drift

1487.71.
1'4 m

SOUNDING WIRE.

DOWN.

UP.

TURNS.

DREDGE ROPE.

DOWN.

UP.

0

100

200

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

13 a **Polydora**
3 a **Polydora**
12 a **Caprellidae**
13 a **Caprellidae**
14 a **Caprellidae**
15 a **Caprellidae**
16 a **Alcyonaria**
17 a **Alcyonaria**

Osefali, 8.35-7.11 (Am) 8/10 m.

125 fms - (Jap. #80.)

| | | | |
|--|------|---------------|----------------|
| | 2500 | 35° 02' 15" N | 138° 47' 50" E |
| | 2600 | | |
| | 2700 | | |
| | 2800 | | |
| | 2900 | | |
| | 3000 | | |
| | 3100 | | |
| | 3200 | | |
| | 3300 | | |
| | 3400 | | |
| | 3500 | | |
| | 3600 | | |
| | 3700 | | |
| | 3800 | | |
| | 3900 | | |
| | 4000 | | |

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|---------|-----------------------|----------|------------|
| 25 | | | | |
| 50 | | | | |
| 100 | | | | |
| 200 | | | | |
| 300 | ✓ 10 sp | Fishes | | |
| 400 | ✓ 4 " | Crustaceans | | |
| 500 | ✓ 2 " | Small crustaceans | | |
| 600 | ✓ 1 " | Crustacean appendages | | |
| 700 | ✓ 2 " | " | macrozoa | |
| 800 | ✓ 2 " | " | macrozoa | |
| 900 | ✓ 1 " | Polyzoa | | |
| 1000 | ✓ 3 " | Opiliones | | |

| | |
|-------|--------------|
| ✓ 2 " | Polychaeta |
| ✓ 3 " | Amphipoda |
| ✓ 4 " | Sponges |
| ✓ 1 " | Leptocaulids |
| ✓ 1 " | Cephalopods |
| ✓ 4 " | Actinians |
| ✓ 1 " | Hydroids |
| ✓ 1 " | Alcyonaria |

REMARKS:

No. **3717** **D2** Date

Machine. Reel.

Turns Cor. +

Shot or lead

Bottom

Bottom temperature

No. of thermometer

Corrected temperature

Air **75** Surface

Trawl or dredge

Depth **75-100-63**
from chart.

did not sound.

Cor.

Drift

{ **N 53° E, $\frac{2}{3}$**
5700 $\frac{1}{2}$

66

SOUNDING WIRE.

DOWN.

UP.

TURNS.

DREDGE ROPE.

DOWN.

UP.

0

100

200

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

9-27

Yano Ura, 8.34° E. (11) 0.8 m. l.

Yano Ura.

(p. 80.)

2500
2600
2700
2800
2900
3000
3100
3200
3300
3400
3500
3600
3700
3800
3900
4000

35° 02' 15" N
138° 46' 40" E

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|-------|--------------|------|------------|
| 25 | | | | |
| 50 | | | | |
| 100 | | | | |
| 200 | | | | |
| 300 | 10 | 10 | | |
| 400 | 2 | 1 | | |
| 500 | 1 | 1 | | |
| 600 | 5 | 1 | | |
| 700 | 2 | 1 | | |
| 800 | 4 | 1 | | |
| 900 | 2 | 1 | | |
| 1000 | 1 | 1 | | |

6

4

2

3

3

3

2

3

REMARKS:

Amphibia

Echin

Polychaeta

Crinoid

Alcyonaria

Polychaeta

Sponges

No. 3718 15- Date

Machine. Recl.

Turns Cor. +

Depth 65 fms.

Shot or lead

Bottom

Bottom temperature

No. of thermometer

Cor.

Corrected temperature

Air 68 Surface 65Drift 5/6 mTrawl or dredge 5 1/2 / 12

| SOUNDING WIRE. | | TURNS. | DREDGE ROPE. | |
|----------------|-----|--------|--------------|-----|
| DOWN. | UP. | | DOWN. | UP. |
| | | 0 | | |
| | | 100 | | |
| | | 200 | | |
| | | 300 | | |
| | | 400 | | |
| | | 500 | | |
| | | 600 | | |
| | | 700 | | |
| | | 800 | | |
| | | 900 | | |
| | | 1000 | | |
| | | 1100 | | |
| | | 1200 | | |
| | | 1300 | | |
| | | 1400 | | |
| | | 1500 | | |
| | | 1600 | | |
| | | 1700 | | |
| | | 1800 | | |
| | | 1900 | | |
| | | 2000 | | |
| | | 2100 | | |
| | | 2200 | | |
| | | 2300 | | |
| | | 2400 | | |

Oct 24th, 5.370-71.1 km 1.2 m

from chart.
(24.580)

| | | |
|------|----------|-----|
| 2500 | 35° 02' | 35" |
| 2600 | 138° 48' | 10" |
| 2700 | | |
| 2800 | | |
| 2900 | | |
| 3000 | | |
| 3100 | | |
| 3200 | | |
| 3300 | | |
| 3400 | | |
| 3500 | | |
| 3600 | | |
| 3700 | | |
| 3800 | | |
| 3900 | | |
| 4000 | | |

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|-------|--------------|------|------------|
| 25 | | | | |
| 50 | | | | |
| 100 | | | | |
| 200 | | | | |
| 300 | | | | |
| 400 | 3 | Fishes. | | |
| 500 | 1 | Trachinotus | | |
| 600 | 1 | Trachinotus | | |
| 700 | 2 | Trachinotus | | |
| 800 | 2 | Trachinotus | | |
| 900 | 1 | Trachinotus | | |
| 1000 | 1 | Crustacea | | |

REMARKS:

- ✓ 1 h. American
- ✓ 1 h. American
- ✓ 2 h. Starfish
- ✓ 1 h. Opiliones
- ✓ 2 h. Crustacea
- ✓ 3 h. Crustacea
- ✓ 1 h. Crustacea

No.

Date

Machine.

Reel.

Turns

Cor. +

Depth

Shot or lead

Bottom

Bottom temperature

No. of thermometer

Corrected temperature

Air

Surface

Trawl or dredge

Tanner, 1 End. Night - 10.15.16

90 to 70 fms.
from chart

Cor.

S 40° E.

Drift

1/3 m.

66

SOUNDING WIRE.

TURNS.

DREDGE ROPE.

DOWN.

UP.

DOWN.

UP.

0

100

175

200

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

25.10

32.10

2.10

46.10

Ose-gaki, S. 13° 11', 1.5 m.

Yano Ura

2500

2600

2700

2800

2900

3000

3100

3200

3300

3400

3500

3600

3700

3800

3900

4000

Lat. 35° 03' N
Long. 138° 47' 40" E.

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|--|--------------|------|------------|
| 25 | Contents of deep haul in all sequential features similar to St. 3720, except plates, of which 430 were none - | | | |
| 50 | | | | |
| 100 | | | | |
| 200 | | | | |
| 300 | | | | |
| 400 | | | | |
| 500 | | | | |
| 600 | | | | |
| 700 | | | | |
| 800 | | | | |
| 900 | | | | |
| 1000 | | | | |

REMARKS:

Hutchinson

No. *3557* Date *11 May 1888*

Machine. Reel.

Turns Cor. +

Shot or lead

Bottom

Bottom temperature

No. of thermometer

Corrected temperature

Air

Surface

Cor.

Drift

Trawl or dredge *S. Trawl - no runner weight*

| SOUNDING WIRE. | | TURNS. | DREDGE ROPE. | |
|----------------|-----|----------------|---------------|-----|
| DOWN. | UP. | | DOWN. | UP. |
| | | 0 | <i>2-15.5</i> | |
| | | 100 | <i>11.4</i> | |
| | | 110 | | |
| | | 200 | <i>14.5</i> | |
| | | 300 | | |
| | | 400 | | |
| | | 500 | | |
| | | 600 | | |
| | | 700 | | |
| | | 800 | | |
| | | 900 | | |
| | | 1000 | | |
| | | 1100 | | |
| | | 1200 | | |
| | | 1300 | | |
| | | 1400 | | |
| | | 1500 | | |
| | | 1600 | | |
| | | 1700 | | |
| | | 1800 | | |
| | | 1900 | | |
| | | 2000 | | |
| | | 2100 | | |
| | | 2200 | | |
| | | 2300 | | |
| | | 2400 | | |

Off Zaki, S. 36075. 0.8 m -

Yguo Bar -

2500
2600
2700
2800
2900
3000
3100
3200
3300
3400
3500
3600
3700
3800
3900
4000

138° 47' 50" E
15° 02' 15" N

CONTENTS SERIAL TEMPERATURES

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|--------|--------------|------|------------|
| 25 | ✓ 60.0 | 1 | | |
| 50 | ✓ 10.0 | 1 | | |
| 100 | ✓ 4 " | 1 | | |
| 200 | ✓ 1 " | 1 | | |
| 300 | ✓ 2 " | 1 | | |
| 400 | ✓ 2 " | 1 | | |
| 500 | ✓ 1 " | 1 | | |
| 600 | ✓ 1 " | 1 | | |
| 700 | ✓ 2 " | 1 | | |
| 800 | ✓ 2 " | 1 | | |
| 900 | ✓ 2 " | 1 | | |
| 1000 | ✓ 3 " | 1 | | |

1 Fish
 1 Brachiopods
 1 Gasteropods
 1 Mollusks
 1 Crustacea
 1 Annelids
 1 Myxozonidae
 1 Starfish
 1 Sponges
 1 Crinoids
 1 Algae
 1 Hydroids
 1 Pteropods

REMARKS:

✓ 2 " Corals
 ✓ 3 " Sponges

No.

Date

12th / 11th

00.

Machine.

Reel.

Turns

Cor. +

Depth

Shot or lead

Bottom

Bottom temperature

No. of thermometer

Cor.

Corrected temperature

Air

Surface

Drift

Trawl or dredge

SOUNDING WIRE.

DREDGE ROPE.

DOWN.

UP.

TURNS.

DOWN.

UP.

15.25

7.20.30

0

6.15

19.20

100

1.15

18.20

200

1.15

17.20

300

1.15

16.20

400

1.15

15.20

500

1.15

14.20

600

1.15

13.20

700

1.15

12.20

800

1.15

11.20

900

1.15

10.20

1000

1.15

9.20

1100

1.15

8.20

1200

1.15

7.20

1300

1.15

6.20

1400

1.15

5.20

1500

1.15

4.20

1600

1.15

3.20

1700

1.15

2.20

1800

1.15

1.20

1900

1.15

0.20

2000

1.15

0.20

2100

1.15

0.20

2200

1.15

0.20

2300

1.15

0.20

2400

Off Santa, N. 49° W. 2.8 m.

| | | |
|----------------------|------|-------|
| Off Santa, N. 49° W. | 2500 | Total |
| 2600 | | |
| 2700 | | |
| 2800 | | |
| 2900 | | |
| 3000 | | |
| 3100 | | |
| 3200 | | |
| 3300 | | |
| 3400 | | |
| 3500 | | |
| 3600 | | |
| 3700 | | |
| 3800 | | |
| 3900 | | |
| 4000 | | |

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|-----------------|------------------------|------|------------|
| 25 | Not | fully down from weight | | |
| 50 | gyroscopic beam | bottom | | |
| 100 | curved, and | about 4° from | | |
| 200 | straight line | | | |
| 300 | 6 sp | fishes | | |
| 400 | 1 " | fishes | | |
| 500 | 1 " | fishes | | |
| 600 | 1 " | fishes | | |
| 700 | 2 " | fishes | | |
| 800 | 2 " | fishes | | |
| 900 | 4 " | fishes | | |
| 1000 | 1 " | fishes | | |

REMARKS:

No. ~~115~~ Date 18 May 1901

Tanner Machine. - Reel.

Turns 44 Cor. +

Depth 44 fms

Shot or Lead 26 lb.

Bottom Vol. Sand.

Bottom temperature

No. of thermometer

Cor.

Corrected temperature

Air 65

Surface 64

Drift

Trawl or dredge

SOUNDING WIRE.

DREDGE ROPE.

DOWN.

UP.

TURNS.

DOWN.

UP.

| | | | |
|--------|-------|------|--|
| 11- 15 | 12.30 | 0 | |
| 15.00 | 11.57 | 44 | |
| | | 100 | |
| | | 200 | |
| | | 300 | |
| | | 400 | |
| | | 500 | |
| | | 600 | |
| | | 700 | |
| | | 800 | |
| | | 900 | |
| | | 1000 | |
| | | 1100 | |
| | | 1200 | |
| | | 1300 | |
| | | 1400 | |
| | | 1500 | |
| | | 1600 | |
| | | 1700 | |
| | | 1800 | |
| | | 1900 | |
| | | 2000 | |
| | | 2100 | |
| | | 2200 | |
| | | 2300 | |
| | | 2400 | |

| | | | |
|--|------|-------|----|
| | 2500 | | |
| | 2600 | | |
| | 2700 | | |
| | 2800 | | |
| | 2900 | | |
| | 3000 | | |
| | 3100 | | |
| | 3200 | 496 | 12 |
| | 3300 | 44 | 10 |
| | 3400 | | |
| | 3500 | 415 2 | 43 |
| | 3600 | | 45 |
| | 3700 | | |
| | 3800 | | |
| | 3900 | | |
| | 4000 | | |

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|-------|--------------|------|------------|
| 25 | | | | |
| 50 | | | | |
| 100 | | | | |
| 200 | | | | |
| 300 | | | | |
| 400 | | | | |
| 500 | | | | |
| 600 | | | | |
| 700 | | | | |
| 800 | | | | |
| 900 | | | | |
| 1000 | | | | |

REMARKS:

No.

Date

Machine

Reel

Turns

Cor. +

Depth

Shot or lead

Bottom

Bottom temperature

No. of thermometer

Cor.

Corrected temperature

Air

Surface

Drift

Trawl or dredge

SOUNDING WIRE.

DOWN.

UP.

DREDGE ROPE.

DOWN.

UP.

TURNS.

0

100

200

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

2500

2600

2700

2800

2900

3000

3100

3200

3300

3400

3500

3600

3700

3800

3900

4000

4100

4200

4300

4400

4500

4600

4700

4800

4900

5000

Yokohama Bay, Sept. 3. 7 am.

| | | |
|------|--------|---------|
| 2500 | 31.2 | 812.6 |
| 2600 | 34.5 | 55.56. |
| 2700 | 136.42 | 3.5 86. |
| 2800 | | |
| 2900 | | |
| 3000 | | |
| 3100 | | |
| 3200 | | |
| 3300 | | |
| 3400 | | |
| 3500 | | |
| 3600 | | |
| 3700 | | |
| 3800 | | |
| 3900 | | |
| 4000 | | |

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|---------|--------------|------|------------|
| 25 | Control | of nit | | |
| 50 | ✓ 5 " | 2000 | | |
| 100 | ✓ 1 " | 2000 | | |
| 200 | ✓ 5 " | 2000 | | |
| 300 | ✓ 2 " | 2000 | | |
| 400 | ✓ 1 " | 2000 | | |
| 500 | ✓ 1 " | 2000 | | |
| 600 | ✓ 3 " | 2000 | | |
| 700 | ✓ 2 " | 2000 | | |
| 800 | ✓ 2 " | 2000 | | |
| 900 | ✓ 1 " | 2000 | | |
| 1000 | ✓ 1 " | 2000 | | |

REMARKS:

No. 3723 Date

Machine. Reel.

Turns Hand Cor. 1 Depth 13 fmsShot or lead 12 lbs

Bottom

Bottom temperature

No. of thermometer 1691 Cor.

Corrected temperature

Air 61 Surface 62 Drift 1 mile

Trawl or dredge

SOUNDING WIRE.

DOWN.

UP.

TURNS.

DREDGE ROPE.

DOWN.

UP.

0

100

200

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

10th Kaituma Light, N 23° 11' E. 6.7 mi

| | | |
|---------------------|------|--|
| <p>13 to 16 fms</p> | 2500 | <p>Jap. Chart #126. 34° 51' 35" N. 134° 41' 10" E.</p> |
| | 2600 | |
| | 2700 | |
| | 2800 | |
| | 2900 | |
| | 3000 | |
| | 3100 | |
| | 3200 | |
| | 3300 | |
| | 3400 | |
| | 3500 | |
| | 3600 | |
| | 3700 | |
| | 3800 | |
| | 3900 | |
| | 4000 | |

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|------------------|--------------|-------------|------------|
| 25 | Contents of net. | | | |
| 50 | | | | |
| 100 | ✓ 4 sp | Fishes | | |
| 200 | ✓ 1 " | Terrestrial | | |
| 300 | ✓ 4 " | Polychaetes | | |
| 400 | ✓ 3 " | Camelotricha | | |
| 500 | ✓ 1 " | Dentobrya | | |
| 600 | ✓ 2 " | Crustacea | | |
| 700 | ✓ 1 " | " | brachyopoda | |
| 800 | ✓ 1 " | Stomatopoda | | |
| 900 | ✓ 5 " | Annelids | | |
| 1000 | ✓ 2 " | Echini | | |

REMARKS:

No. *3524* Date *15 June*
 Machine. *Sigsbee* Reel. *1*
 Turns *500* Cor. + *10* Depth *510 fms*
 Shot or lead *12*
 Bottom *soft mud* *no specimen*
 Bottom temperature }
 No. of thermometer } *52* Cor. *52*
 Corrected temperature }
 Air *68* Surface *64* Drift *1.2 m*
 Trawl or dredge *1*

| SOUNDING WIRE. | | TURNS. | DREDGE ROPE. | |
|----------------|-----|--------|--------------|-----|
| DOWN. | UP. | | DOWN. | UP. |
| | | 0 | | |
| | | 100 | | |
| | | 200 | | |
| | | 300 | | |
| | | 400 | | |
| | | 500 | | |
| | | 600 | | |
| | | 700 | | |
| | | 800 | | |
| | | 900 | | |
| | | 1000 | | |
| | | 1100 | | |
| | | 1200 | | |
| | | 1300 | | |
| | | 1400 | | |
| | | 1500 | | |
| | | 1600 | | |
| | | 1700 | | |
| | | 1800 | | |
| | | 1900 | | |
| | | 2000 | | |
| | | 2100 | | |
| | | 2200 | | |
| | | 2300 | | |
| | | 2400 | | |

New York, N. 80° 28' W. 100 207 m.
S. 98° 5'.

| | | | |
|------|-----|------|-----------------|
| 1911 | 200 | 2500 | |
| | | 2600 | 34° 46' 20" N |
| | | 2700 | 136° 43' 10" E. |
| | | 2800 | |
| | | 2900 | |
| | | 3000 | |
| | | 3100 | |
| | | 3200 | |
| | | 3300 | |
| | | 3400 | |
| | | 3500 | |
| | | 3600 | |
| | | 3700 | |
| | | 3800 | |
| | | 3900 | |
| | | 4000 | |

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|-----------------|--------------|------|------------|
| 25 | Contents of net | | | |
| 50 | | | | |
| 100 | ✓ 2 sp | Fishes | | |
| 200 | ✓ 1 " | Trinoidae | | |
| 300 | ✓ 3 " | Scallopidae | | |
| 400 | ✓ 2 " | Gamelleidae | | |
| 500 | ✓ 2 " | Ctenophora | | macrura |
| 600 | ✓ 1 " | " | | brachyura |
| 700 | ✓ 1 " | Stomatopoda | | |
| 800 | ✓ 4 " | Annelids | | |
| 900 | ✓ 1 " | Nemertea | | |
| 1000 | ✓ 2 " | Echin | | |
| | ✓ 2 " | Ophiurae | | |

REMARKS:

No. 3725 D Date 15

Machine. Reel.

Turns Hand Cor. 4 Lead Lead Depth 13 fms.Shot or lead 1 lbBottom Sh. S. Sh.

Bottom temperature

No. of thermometer None Cor.

Corrected temperature

Air 62 Surface 64 DriftTrawl or dredge 8

SOUNDING WIRE.

DOWN.

UP.

TURNS.

DREDGE ROPE.

DOWN.

UP.

0
 100
 200
 300
 400
 500
 600
 700
 800
 900
 1000
 1100
 1200
 1300
 1400
 1500
 1600
 1700
 1800
 1900
 2000
 2100
 2200
 2300
 2400

St. George, N. 10° 30' W. 8.0 mi

| | | |
|---------|------|-----------------|
| 13 fms. | 2500 | 34° 37' 35" N. |
| | 2600 | 136° 46' 10" E. |
| | 2700 | |
| | 2800 | |
| | 2900 | |
| | 3000 | |
| | 3100 | |
| | 3200 | |
| | 3300 | |
| | 3400 | |
| | 3500 | |
| | 3600 | |
| | 3700 | |
| | 3800 | |
| | 3900 | |
| | 4000 | |

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|-----------------|----------------|----------|------------|
| 25 | Contents of net | | | - |
| 50 | 2 sp | 2 fish | | |
| 100 | 1 " | 1 annelid | | |
| 200 | 6 " | Gastropods | | |
| 300 | 6 " | Lamellibranchs | | |
| 400 | 13 " | Cnidaria | | |
| 500 | 2 " | " | hydras | |
| 600 | 5 " | " | anemones | |
| 700 | 1 " | Tropidopoda | | |
| 800 | 4 " | Annelids | | |
| 900 | 1 " | Echinurus | | |
| 1000 | 2 " | Echinurus | | |
| | 2 " | REMARKS: | | |
| | 2 " | Cnidaria | | |
| | 1 " | Tropidopoda | | |
| | 3 " | Hydromedusae | | |
| | 3 " | Cladocera | | |
| | 3 " | Stomatopoda | | |

No. 3721 Date 15 May 1901

Tanner Machine. Reel.

Turns 25 Cor. + 1 Depth 26 fms.

Shot or lead 26#

Bottom gy. Sd. Sand.

Bottom temperature

No. of thermometer } none Cor.

Corrected temperature

Air 64 Surface 63 Drift 5 1/2 mi. South

Trawl or dredge 15' Tanner 7 1/2' M. & S.

SOUNDING WIRE.

DREDGE ROPE.

DOWN.

UP.

TURNS.

DOWN.

UP.

36.40

37.50

0

38.30

02.30

36.40

37.50

400

41.10

2-00.40

200

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

Takimatau Zaki, N. S. W. (low), 5, 7 m.
on Atsumi Penn.

Tomari Sea.

2500

2600

2700

2800

2900

3000

3100

3200

3300

3400

3500

3600

3700

3800

3900

4000

126.
34° 31' 12" N.
137° 12' 35" E.

196
25
471
11
25
56

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|------------------|--------------------|------|------------|
| 25 | Contents of net. | | | |
| 50 | | | | |
| 100 | ✓ 1 sp. | Fishes | | |
| 200 | ✓ 1 " | Tridacna melastoma | | |
| 300 | ✓ 2 " | Crustacea | | |
| 400 | ✓ 2 " | " | | |
| 500 | ✓ 2 " | Amphipods | | |
| 600 | ✓ 4 " | Annelids | | |
| 700 | ✓ 1 " | Dipneustes | | |
| 800 | ✓ 2 " | Echinoids | | |
| 900 | ✓ 1 " | Crinoids | | |
| 1000 | | | | |

REMARKS:

16.2

No.

Date 16th May 1900

Machine. — Reel. —

Turns

Cor. +

Depth

Shot or lead

Bottom

Bottom temperature

No. of thermometer

Cor.

Corrected temperature

Air

Surface

Drift

Trawl or dredge

SOUNDING WIRE.

DOWN.

UP.

TURNS.

DREDGE ROPE.

DOWN.

UP.

33 25

1-34.00

33 40

32

200

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

34

35 20

35 25

Omairi 2540, N 17° 5, 4.7 m

Omairi Bank

2500

2600

2700

2800

2900

3000

3100

3200

3300

3400

3500

3600

3700

3800

3900

4000

11.1

34° 25' 45" N

130° 11' 15" E

4.6

12.9

1.2

1.0

2

2.2

3.7

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|----------------|--------------|------|------------|
| 25 | Continued from | | | |
| 50 | | | | |
| 100 | 2.0 | Fishes | | |
| 200 | 2.0 | Gastropods | | |
| 300 | 2.0 | Nautilus | | |
| 400 | 2.0 | Crustacea | | |
| 500 | 2.0 | " | | brachyura |
| 600 | 4.0 | " | | decapoda |
| 700 | 1.0 | Myxostomidae | | |
| 800 | 2.0 | Stom. | | |
| 900 | 4.0 | Ophiura | | |
| 1000 | 2.0 | Polys. | | |
| 1100 | 4.0 | Alcyonaria | | |
| 1200 | 3.0 | Pendulata | | |
| 1300 | 1.0 | Actinia | | |
| 1400 | 2.0 | Sponges | | |

REMARKS:

No. 3928

Date Aug 11 1900

Machine. — Reel.

Turns 22 Cor. + # 2 Depth 24

Shot or lead 36

Bottom

Bottom temperature

No. of thermometer 4444 Cor.

Corrected temperature

Air 62 Surface 64 Drift 1 1/2 mi

Trawl or dredge

SOUNDING WIRE.

DOWN.

UP.

TURNS.

DREDGE ROPE.

DOWN.

UP.

57.00

58.00

30

06.30

36.00

100

200

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

Grainy, 11/10, N 170 E. 11 1/4 mi

| | | | |
|--|------|---------------|----------------|
| <p>Grainy, 11/10, N 170 E. 11 1/4 mi</p> <p>OK</p> <p>11/10</p> <p>11/10</p> | 2500 | 64° 25' 10" N | 138° 10' 30" E |
| | 2600 | | |
| | 2700 | | |
| | 2800 | | |
| | 2900 | | |
| | 3000 | 45° | 12° |
| | 3100 | | |
| | 3200 | 64° | |
| | 3300 | | |
| | 3400 | | |
| | 3500 | | |
| | 3600 | | |
| | 3700 | | |
| | 3800 | | |
| | 3900 | | |
| | 4000 | | |

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|----------------------------|--------------|------|------------|
| | Contents of net | | | |
| 25 | ✓ 10° | Nudi branch | | |
| 50 | ✓ 1 " | Annelids | | |
| 100 | ✓ 2 " | Sponges | | |
| 200 | ✓ 3 " | Alcyonaria | | |
| 300 | ✓ 3 " | Pennatulids | | |
| 400 | | | | |
| 500 | | | | |
| 600 | | | | |
| 700 | | | | |
| 800 | | | | |
| 900 | | | | |
| 1000 | | | | |

REMARKS:

No. *2719*Date *16 July 1878*Machine. *Recl.*Turns *34*Cor. + *2*Depth *34 m*Shot or lead *26 lb*Bottom *Mud*

Bottom temperature

No. of thermometer

Corrected temperature

Air *62*Surface *12*Drift *None*Trawl or dredge *None*

SOUNDING WIRE.

DOWN.

UP.

TURNS.

DREDGE ROPE.

DOWN.

UP.

| | | | | |
|----------------|-------------|------|--|--|
| <i>7.30.10</i> | <i>1.00</i> | 0 | | |
| | <i>1.45</i> | 100 | | |
| | | 200 | | |
| | | 300 | | |
| | | 400 | | |
| | | 500 | | |
| | | 600 | | |
| | | 700 | | |
| | | 800 | | |
| | | 900 | | |
| | | 1000 | | |
| | | 1100 | | |
| | | 1200 | | |
| | | 1300 | | |
| | | 1400 | | |
| | | 1500 | | |
| | | 1600 | | |
| | | 1700 | | |
| | | 1800 | | |
| | | 1900 | | |
| | | 2000 | | |
| | | 2100 | | |
| | | 2200 | | |
| | | 2300 | | |
| | | 2400 | | |

May 17, 1881, 117° E. 12.7 m

| | | |
|--|------|----------------|
| <p>May 17, 1881</p> <p>of</p> <p>117° E.</p> | 2500 | 131° 23' 30" N |
| | 2600 | 131° 10' E |
| | 2700 | |
| | 2800 | |
| | 2900 | |
| | 3000 | 456 12 |
| | 3100 | |
| | 3200 | |
| | 3300 | |
| | 3400 | |
| | 3500 | |
| | 3600 | |
| | 3700 | |
| | 3800 | |
| | 3900 | |
| | 4000 | |

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|-----------------|--------------|------|------------|
| 25 | Contents of net | | | |
| 50 | | | | |
| 100 | ✓ 5 | Fishes | | |
| 200 | ✓ 2 | Gastropods | | |
| 300 | ✓ 5 | Tridacnids | | |
| 400 | ✓ 3 | Annelids | | |
| 500 | ✓ 3 | Crustacea | | |
| 600 | ✓ 1 | Polysoa | | |
| 700 | ✓ 2 | Gastropods | | |
| 800 | ✓ 1 | Cephala | | |
| 900 | ✓ 1 | Pycnogonids | | |
| 1000 | ✓ 4 | Gadoidae | | |
| | ✓ 2 | Stars | | |
| | ✓ 2 | Crinoids | | |
| | ✓ 1 | Aetidea | | |
| | ✓ 5 | Alcyonaria | | |
| | ✓ 4 | Sponges | | |
| | ✓ 3 | Pennatulids | | |

REMARKS:

No. *3730* Date *6* Machine. Reel. *6*
 Turns *32* Cor. + *2* Depth *34*
 Shot or lead *437*
 Bottom *Mud*
 Bottom temperature
 No. of thermometer *None* Cor.
 Corrected temperature *20*
 Air *21* Surface *24* Drift *1 3/4*
 Trawl or dredge *8*

SOUNDING WIRE.

DOWN.

UP.

TURNS.

DREDGE ROPE.

DOWN.

UP.

0

100

200

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

Contents of net

6 *Fishes*
4 *Gastropods*
4 *X-ray Branch*
9 *Crustaceans* *anomura*
2 *Annulids*
1 *Polychaetes*
1 *Pycnogonids*
10 *Stems*
4 *Ephyrae*
2 *Cnidaria*
1 *Actinia*
3 *Alcyonaria*
3 *Penicillaria*
1 *Coral*
4 *Sponges*

55mai 7/24/10, 117°E. 14.5 mi

| | | | |
|---------------|------|----------|------|
| 55mai 7/24/10 | 2500 | 138° 00' | 11.0 |
| | 2600 | 34° 55' | 15.0 |
| 110° 12' | 2700 | 138° 00' | 11.0 |
| | 2800 | | |
| 112° | 2900 | | |
| | 3000 | 1426 | |
| | 3100 | 132 | 10 |
| | 3200 | 1468 | |
| | 3300 | | |
| | 3400 | | |
| | 3500 | | |
| | 3600 | | |
| | 3700 | | |
| | 3800 | | |
| | 3900 | | |
| | 4000 | | |

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|-------|--------------|------|------------|
| 25 | | | | |
| 50 | | | | |
| 100 | | | | |
| 200 | | | | |
| 300 | | | | |
| 400 | | | | |
| 500 | | | | |
| 600 | | | | |
| 700 | | | | |
| 800 | | | | |
| 900 | | | | |
| 1000 | | | | |

REMARKS:

1. 100 fms: 8.43.30.

No. *3721* Date *16 May 1904**Tanner* Machine. Reel.Turns *2* Cor. + Depth *2*Shot or lead *26 pound*

Bottom

Bottom temperature

No. of thermometer *1401* Cor.

Corrected temperature

Air *61* Surface *64* Drift *none*Trawl or dredge *0 Tanner 140 section*

SOUNDING WIRE.

DREDGE ROPE.

| DOWN. | UP. | TURNS. | DOWN. | UP. |
|----------------|----------------|---------------|-----------------|-----|
| | <i>8.53.50</i> | <i>0</i> | | |
| <i>8.52.50</i> | <i>8.52.50</i> | <i>35/100</i> | <i>19.17.40</i> | |
| | | <i>200</i> | <i>3</i> | |
| | | 300 | | |
| | | 400 | | |
| | | 500 | | |
| | | 600 | | |
| | | 700 | | |
| | | 800 | | |
| | | 900 | | |
| | | 1000 | | |
| | | 1100 | | |
| | | 1200 | | |
| | | 1300 | | |
| | | 1400 | | |
| | | 1500 | | |
| | | 1600 | | |
| | | 1700 | | |
| | | 1800 | | |
| | | 1900 | | |
| | | 2000 | | |
| | | 2100 | | |
| | | 2200 | | |
| | | 2300 | | |
| | | 2400 | | |

Omar's Bank

| | | |
|------|----------|---------|
| 2500 | 34° 20' | 35° 20' |
| 2600 | 138° 08' | 45° 08' |
| 2700 | | |
| 2800 | | |
| 2900 | | |
| 3000 | | |
| 3100 | | |
| 3200 | | |
| 3300 | | |
| 3400 | | |
| 3500 | | |
| 3600 | | |
| 3700 | | |
| 3800 | | |
| 3900 | | |
| 4000 | | |

REMARKS:

No. *2732D* Date *Aug 11 1880*
Wm. Machine. Reel. *1*
 Turns *29* Cor. + *2* Depth *41 fms*
 Shot or lead *26 lb*
 Bottom *no specimen*
 Bottom temperature
 No. of thermometer *1810* Cor.
 Corrected temperature
 Air *63* Surface *65* Drift *none*
 Trawl or dredge *5' 2' 125 lb*

SOUNDING WIRE.

DREDGE ROPE.

DOWN.

UP.

TURNS.

DOWN.

UP.

9

100

200

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

Omigaki 1740, N 17° E. 16.5 mi

| | | | |
|--------------|------|----------|------|
| Omigaki Line | 2500 | 1380 08' | 111' |
| 81C | 2600 | 1380 20' | 111' |
| | 2700 | 1380 08' | 111' |
| | 2800 | | |
| | 2900 | | |
| | 3000 | | |
| | 3100 | | |
| | 3200 | | |
| | 3300 | | |
| | 3400 | | |
| | 3500 | | |
| | 3600 | | |
| | 3700 | | |
| | 3800 | | |
| | 3900 | | |
| | 4000 | | |

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|-------|--------------|------|------------|
| 25 | | | | |
| 50 | | | | |
| 100 | | | | |
| 200 | | | | |
| 300 | | | | |
| 400 | | | | |
| 500 | | | | |
| 600 | | | | |
| 700 | | | | |
| 800 | | | | |
| 900 | | | | |
| 1000 | | | | |

Results meagre - net
probably barren.

REMARKS:

Since mi at 10.37.40

Nothing caught.

No. *3733 A* Date *10 May 1900**Tanner* Machine. Reel.Turns *47* Cor. + *2* Depth *49 fms*Shot or lead *26 pound*Bottom *S. gy. vol.*

Bottom temperature

No. of thermometer

Corrected temperature

Air Surface

Drift *1 1/2 m*

Trawl or dredge

SOUNDING WIRE.

DREDGE ROPE.

DOWN.

UP.

TURNS.

DOWN.

UP.

0

100

200

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

Omai Yaku 1540, H 2408, 9.5

| | | |
|----------------|------|---------------|
| Omai Yaku Bank | 2500 | Lat 11° 11' |
| | 2600 | 34° 27' 15" N |
| | 2700 | 138° 10' E |
| | 2800 | |
| | 2900 | |
| | 3000 | |
| | 3100 | |
| | 3200 | |
| | 3300 | |
| | 3400 | |
| | 3500 | |
| | 3600 | |
| | 3700 | |
| | 3800 | |
| | 3900 | |
| | 4000 | |

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|--------------------------------|--------------|------|------------|
| 25 | Very poor haul; few specimens. | | | |
| 50 | | | | |
| 100 | | | | |
| 200 | Contents of net: | | | |
| 300 | | | | |
| 400 | 3 sp | Fishes | | |
| 500 | 5 " | Gastropods | | |
| 600 | 1 " | Crustacea | | |
| 700 | 2 " | Amphipods | | |
| 800 | 2 " | Annelids | | |
| 900 | 1 " | Lipunculidae | | |
| 1000 | 2 " | Stars | | |

REMARKS:

No. *3721*

Date *16 May 1900*

Machine. *Tanner*

Reel. *1*

Turns *216*

Cor. + *2*

Depth *218*

Shot or lead *36 lb*

Bottom *Cr. gy. M. S. M. S.*

Bottom temperature

No. of thermometer *2162*

Cor. *(8.65° E. time)*

Corrected temperature

Air *18*

Surface *18*

Drift *1 1/2 m*

Trawl or dredge *Agassiz*

SOUNDING WIRE.

DOWN.

UP.

TURNS.

DREDGE ROPE.

DOWN.

UP.

200

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

2000

2100

2200

2300

2400

May 20, 1910, N 25° E. 11.0 m

| | | | |
|----------------|------|-----------|----------------|
| Omai Yaki Bank | 2500 | 34° 26' N | 138° 08' 45" E |
| | 2600 | | |
| | 2700 | | |
| | 2800 | | |
| | 2900 | | |
| | 3000 | | |
| | 3100 | | |
| | 3200 | | |
| | 3300 | | |
| | 3400 | | |
| | 3500 | | |
| | 3600 | | |
| | 3700 | | |
| | 3800 | | |
| | 3900 | | |
| | 4000 | | |

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|-------------------|--------------|------|------------|
| 25 | Contents of net - | | | |
| 50 | | | | |
| 100 | 3 sps | Fishes | | |
| 200 | 4 " | Polychaetes | | |
| 300 | 1 " | Nudibranchs | | |
| 400 | 1 " | Crustacea | | |
| 500 | 3 " | | | anomura |
| 600 | 2 " | Amphipods | | |
| 700 | 1 " | Caprellid | | |
| 800 | 2 " | Pycnogonids | | |
| 900 | 2 " | Stars | | |
| 1000 | 3 " | Ophiura | | |
| | 1 " | Echini | | |
| | 1 " | REMARKS: | | |
| | 1 " | Annelids | | |
| | 2 " | Alcyonaria | | |
| | 3 " | Penicillaria | | |
| | 4 " | Sponges | | |

Hutchinson

No. *3355* Date *16 Aug 1900*

Tanner Machine. Reel.

Turns *34* Cor. + *2* Depth *32*

Shot or lead *26 Lb*

Bottom *gy. sand & sh.*

Bottom temperature

No. of thermometer } *none* Cor.

Corrected temperature

Air *66* Surface *65* Drift *N. 1/2 E.*

Trawl or dredge *Tanner 7 ft. beam*

SOUNDING WIRE.

DREDGE ROPE.

| SOUNDING WIRE. | | TURNS. | DREDGE ROPE. | |
|-----------------|--------------|--------|--------------|-----------|
| DOWN. | UP. | | DOWN. | UP. |
| <i>1- 14.20</i> | <i>20 =</i> | 0 | <i>12.20</i> | <i>16</i> |
| <i>19.45</i> | <i>12.50</i> | 100 | | |
| | | 200 | | |
| | | 300 | | |
| | | 400 | | |
| | | 500 | | |
| | | 600 | | |
| | | 700 | | |
| | | 800 | | |
| | | 900 | | |
| | | 1000 | | |
| | | 1100 | | |
| | | 1200 | | |
| | | 1300 | | |
| | | 1400 | | |
| | | 1500 | | |
| | | 1600 | | |
| | | 1700 | | |
| | | 1800 | | |
| | | 1900 | | |
| | | 2000 | | |
| | | 2100 | | |
| | | 2200 | | |
| | | 2300 | | |
| | | 2400 | | |

Omai Zaki Lt Ho, N 15° E. 11.4 m

Omai Zaki Bank

| | | |
|------|-----------------|----|
| 2500 | Jap chart #111. | |
| 2600 | 54° 25' N | |
| 2700 | 138° 08' 30" E | |
| 2800 | | |
| 2900 | | |
| 3000 | | |
| 3100 | | |
| 3200 | | |
| 3300 | | |
| 3400 | 496 | 12 |
| 3500 | 34 | 10 |
| 3600 | 462 | 2 |
| 3700 | | 34 |
| 3800 | | 36 |
| 3900 | | |
| 4000 | | |

SERIAL TEMPERATURES.

| DEPTH. | TEMP. | NO. OF THER. | COR. | COR. TEMP. |
|--------|-------------------|--------------|------|------------|
| 25 | Contents of net - | | | |
| 50 | | | | |
| 100 | ✓ 1 sp | Fishes | | |
| 200 | | | | |
| 300 | ✓ 1 " | Gasteropods | | |
| 400 | ✓ 2 " | Stars | | |
| 500 | ✓ 3 " | Ophiurans. | | |
| 600 | ✓ 2 " | Crinoids | | |
| 700 | ✓ 2 " | Alcyonaria | | |
| 800 | ✓ 3 " | Pennatulids | | |
| 900 | | | | |
| 1000 | | | | |

REMARKS:

No.

Date .

Machine.

Reel.

Turns

Cor. +

Depth

Shot or lead

Bottom

Bottom temperature

No. of thermometer

Cor.

Corrected temperature

Air

Surface

Drift

Trawl or dredge

| SOUNDING WIRE. | | TURNS. | DREDGE ROPE. | |
|----------------|-----|--------|--------------|-----|
| DOWN. | UP. | | DOWN. | UP. |
| | | 0 | | |
| | | 100 | | |
| | | 200 | | |
| | | 300 | | |
| | | 400 | | |
| | | 500 | | |
| | | 600 | | |
| | | 700 | | |
| | | 800 | | |
| | | 900 | | |
| | | 1000 | | |
| | | 1100 | | |
| | | 1200 | | |
| | | 1300 | | |
| | | 1400 | | |
| | | 1500 | | |
| | | 1600 | | |
| | | 1700 | | |
| | | 1800 | | |
| | | 1900 | | |
| | | 2000 | | |
| | | 2100 | | |
| | | 2200 | | |
| | | 2300 | | |
| | | 2400 | | |

29.20
 11.20
 7.00

40
 24
 17



W. J. "Cinudaigna"
 Soap of wass
 Broken up at the
 Norfolk Gaoryard
 about 1887

$$\begin{array}{r} 5 \quad 46 \\ 4 \quad 31 \\ \hline 15 \\ 60 \\ \hline 75 \end{array}$$

$$\begin{array}{r} 8 \quad 2 \\ 40 \quad + \quad 16 \\ \hline 75 \quad 15 \end{array}$$

- 1 - West $5/6$
- 2 - N 70° W. $1\frac{1}{4}$
- 3 - S 74° W. $7/8$
- 4 - N 87° W. $1\frac{1}{4}$
- 5 -

(N 86° W.) $2/3$